Our Working World

Cities at Work

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by Lawrence Senesh
Professor of Economic Education
Purdue University

SRA
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All characters, incidents, and situations in this book are imaginary and have no relation to any person or actual happening, with the exception of references to persons no longer living, and the following: Dots on the Earth; People Make the City: CHICAGO; The Changing Steel City: PITTSBURGH; The Little Giant:ELKHART; Crossroads of Ideas: NEW YORK; The Space City: HOUSTON; A City Fights Poverty: ATLANTA (The Duffey family); Getting Together for Good Government: GREATER MIAMI; A City Rebuilds: PHILADELPHIA; Before and After; Where People Mean More than Cars: SAN FRANCISCO; Water for a Growing City: LOS ANGELES; The Beautiful Ohio; The City That Swallowed Villages: LONDON; A City Married to the Sea: VENICE; A City Rises from Ashes: ROTTERDAM; A City That Has More People than Jobs: CALCUTTA; A City That Uses Its Wits: SINGAPORE; A Day in the Life of a Mayor.

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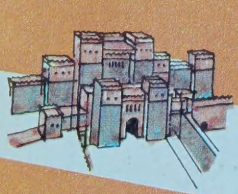
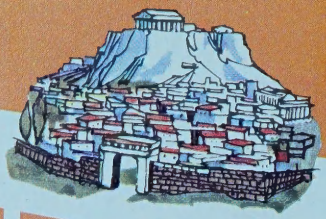
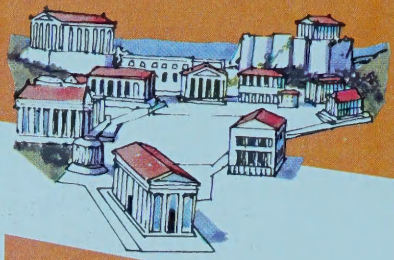


BABYLON


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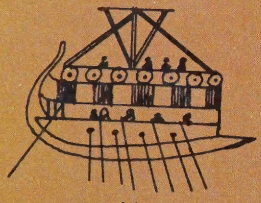
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ATHENS


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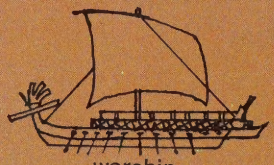
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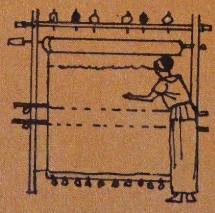
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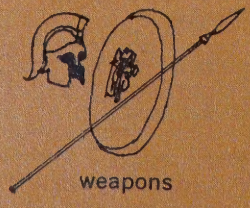
weapons

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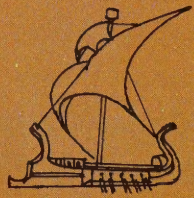
ROME


clothing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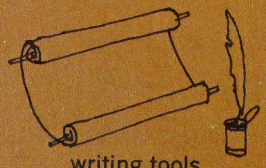
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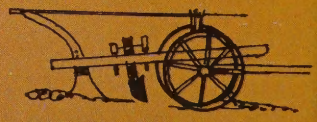
BRUGES


clothing


merchant ship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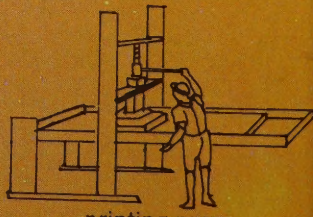
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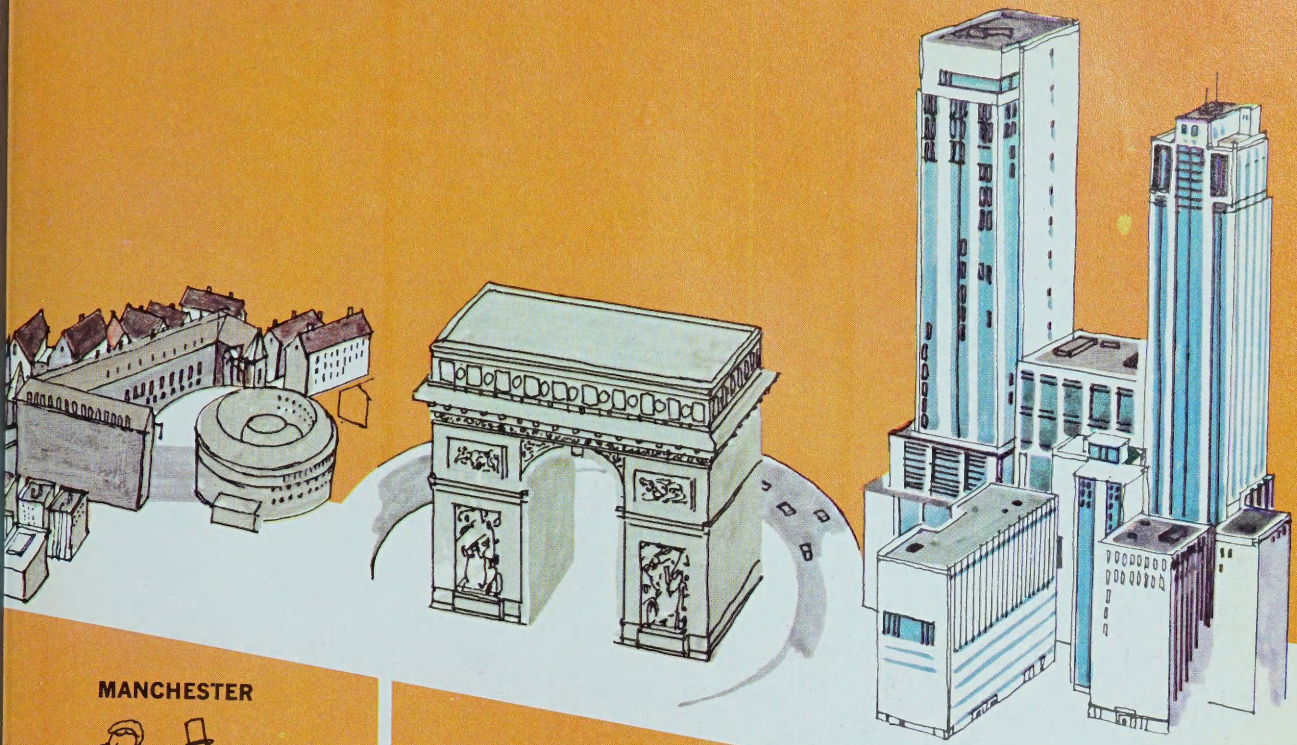
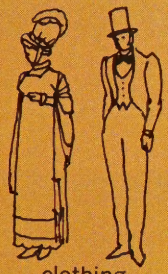


MANCHESTER



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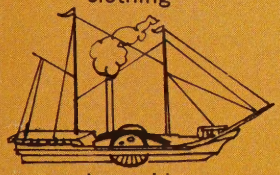

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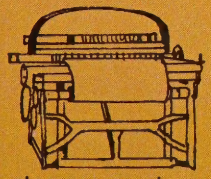

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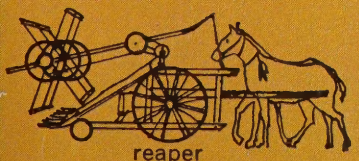

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PARIS

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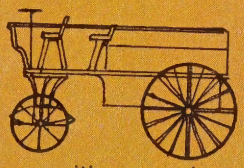
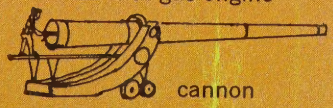


car with gas engine



cannon

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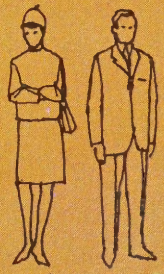
NEW YORK



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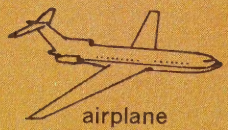

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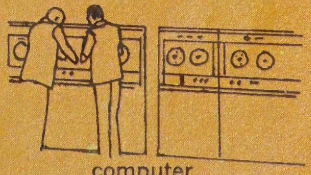

computer

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Dots on the Earth

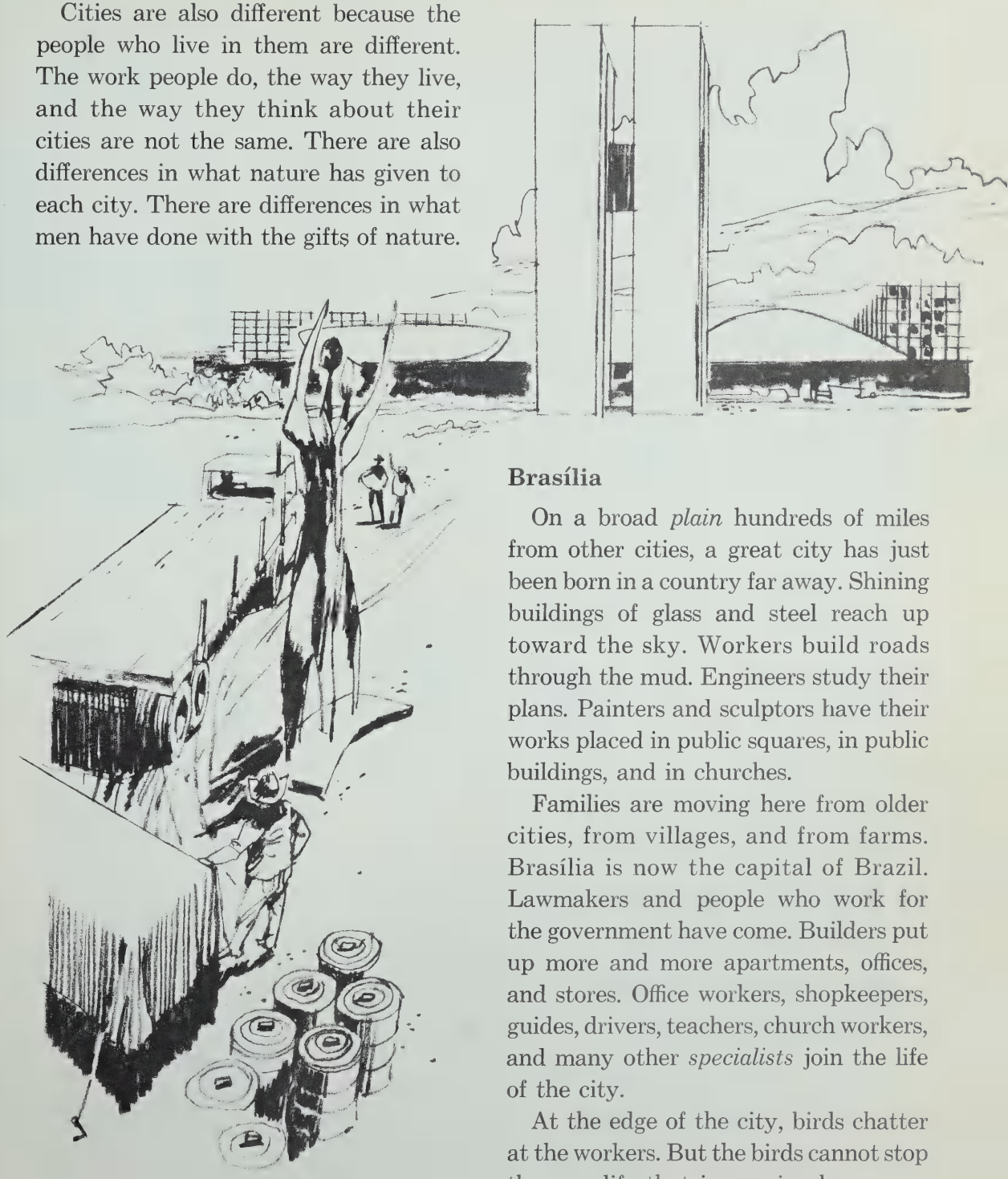
Let us look at our earth.

The great blue areas are the seas. They cover much more than half the earth. The brown and green places are the land. There you can find mountains and valleys, rivers and lakes, deserts and jungles. All these are the work of nature.

But look now at the tiny black dots that mark the land. In some places they seem close together. In other places the dots are far apart.

The dots are cities of men. Each city was built by men. Each city was built to serve the needs of men. The dots on the map all look alike. But the cities they stand for are all different. Some cities are old and some are new. Some cities are small and some are large.

Cities are also different because the people who live in them are different. The work people do, the way they live, and the way they think about their cities are not the same. There are also differences in what nature has given to each city. There are differences in what men have done with the gifts of nature.

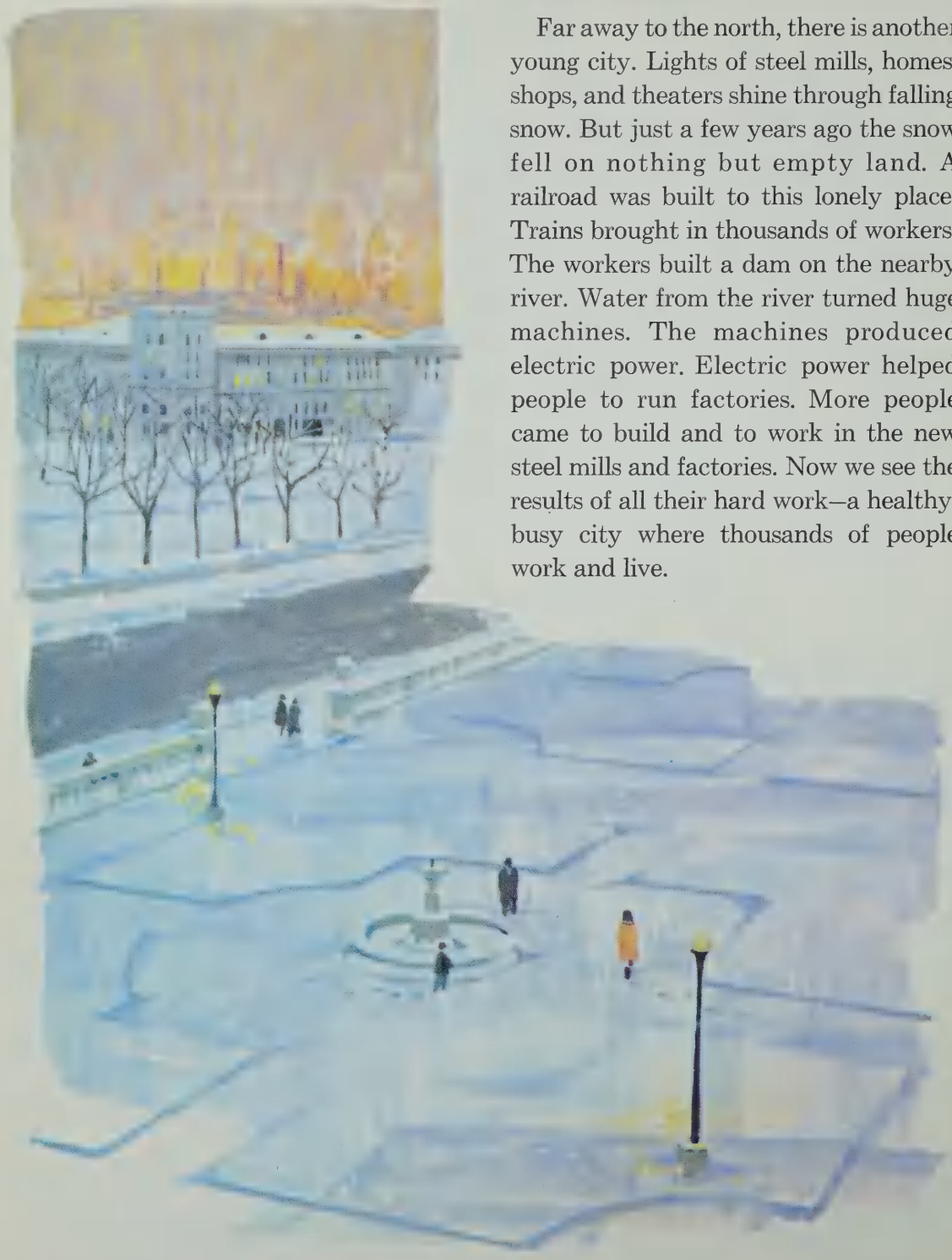


Brasília

On a broad *plain* hundreds of miles from other cities, a great city has just been born in a country far away. Shining buildings of glass and steel reach up toward the sky. Workers build roads through the mud. Engineers study their plans. Painters and sculptors have their works placed in public squares, in public buildings, and in churches.

Families are moving here from older cities, from villages, and from farms. Brasília is now the capital of Brazil. Lawmakers and people who work for the government have come. Builders put up more and more apartments, offices, and stores. Office workers, shopkeepers, guides, drivers, teachers, church workers, and many other *specialists* join the life of the city.

At the edge of the city, birds chatter at the workers. But the birds cannot stop the new life that is growing here.



Magnitogorsk

Far away to the north, there is another young city. Lights of steel mills, homes, shops, and theaters shine through falling snow. But just a few years ago the snow fell on nothing but empty land. A railroad was built to this lonely place. Trains brought in thousands of workers. The workers built a dam on the nearby river. Water from the river turned huge machines. The machines produced electric power. Electric power helped people to run factories. More people came to build and to work in the new steel mills and factories. Now we see the results of all their hard work—a healthy, busy city where thousands of people work and live.

New York City

New York has grown to be one of the biggest cities in the world. From the top of a skyscraper one can see miles and miles of houses and streets and factories spreading from the heart of this city. The heart of this city is a small island. Almost every day millions of people come to this island. Most of them work in the thousands of offices there.

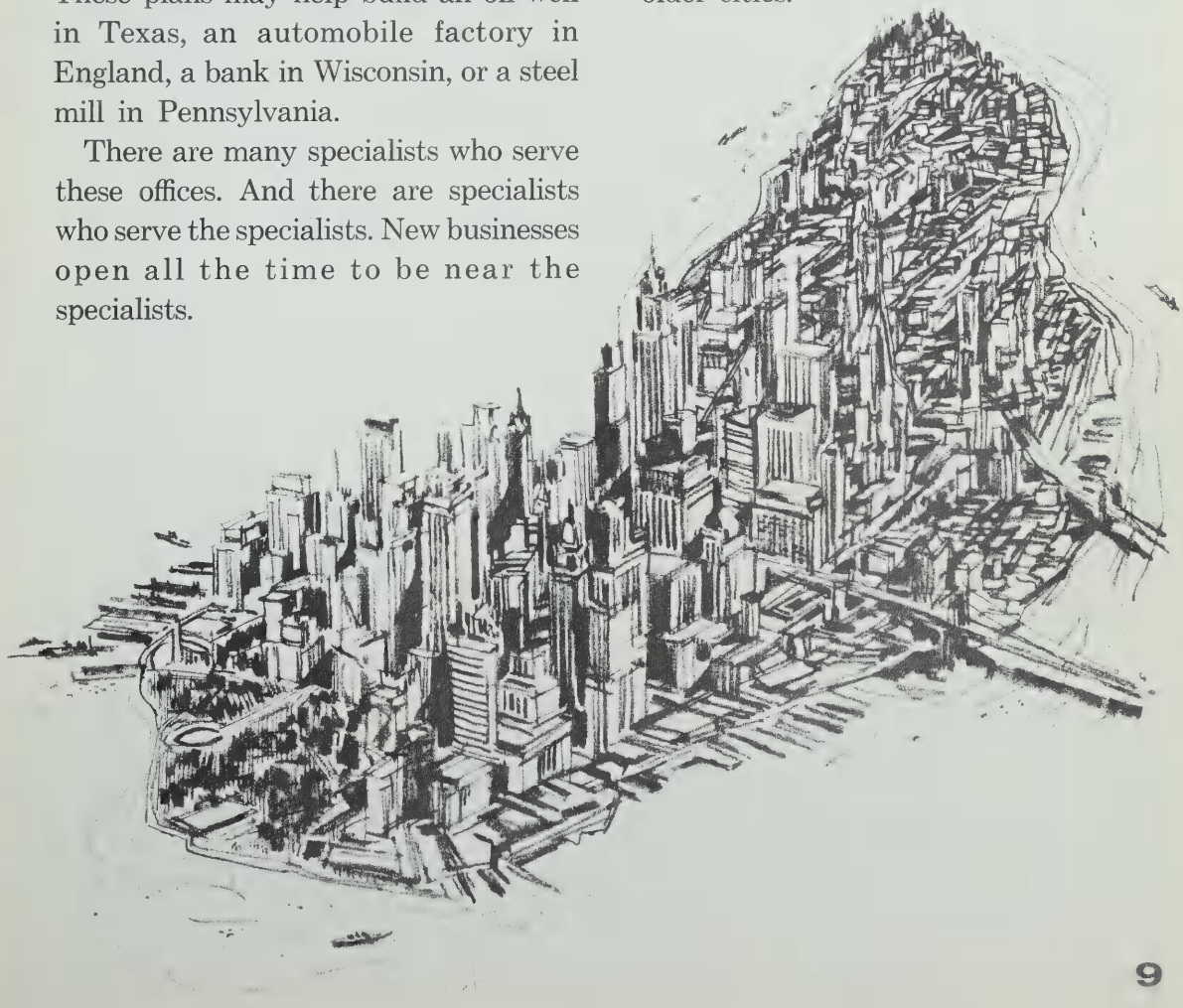
Many of these offices are the main offices of companies that produce *goods* or *services* in other parts of the world. New ideas and plans are tested there. These plans may help build an oil well in Texas, an automobile factory in England, a bank in Wisconsin, or a steel mill in Pennsylvania.

There are many specialists who serve these offices. And there are specialists who serve the specialists. New businesses open all the time to be near the specialists.

There are fine stores, museums, restaurants, theaters, and parks. From docks, airfields, and freight yards, people and goods move on their way.

On this island, wrecking machines are tearing down small buildings. In their places new office and apartment buildings rise toward the sky. This city has no time to grow old.

The cities you have read about are young. They are changing fast to meet the needs of the future. But all over the map there are dots that stand for much older cities.



Babylon

One of the earliest cities in the world was called Babylon. All that is left of Babylon today is broken walls. But once it was a great city in a rich, green valley.

Before Babylon was built, all the people of the valley lived on farms near the river. They were good farmers. They dug *canals* that carried river water to the valley land. So much food grew that everyone did not need to work on the farms in order to eat. Many people were free to do other kinds of work. They left the farmlands.

As the years passed, many people moved together to a place by the river. The place became Babylon. The people had different *customs* and ideas. They learned to live and work together. They *divided the labor*. They became specialists. There were merchants, artists, priests, soldiers, and government workers.

A king ruled the city. He was also the chief priest. The tallest and strongest building in the city was the temple. Pictures of fierce, roaring lions covered the walls along the street to the temple. They reminded the people of the power of the king and the priests. The king and the priests made the laws.

The farmers around Babylon believed that the god of the city owned all the land. The priests collected *rents* from the farmers. The farmers paid their rents with crops and animals. Grain and cattle filled the temple storehouses. The priests invented their own kind of writing. They used writing and numbers to keep *records*. The records showed who paid rents.

In the temple schools, the priests taught other people how to write, read, and count.

The land around Babylon had no metals. So the people *bartered* their extra food for copper, tin, and other metals

from faraway places. *Craftsmen* made the tin and copper into plows, spears, shields, and other useful things. From gold, silver, and precious jewels that the traders brought, the craftsmen of Babylon made cups and plates, bracelets and rings. The people traded the goods they produced for more metals and other things they needed.

Sometimes it was hard to barter with goods, so silver was used as money. Money made trading easier. Trading made life better for all the cities.

At this time Babylon was the biggest gathering of people in one place since the world began. But Babylon could not protect itself from enemies. It was attacked and destroyed.

The story of this early city shows that when people can grow more food than they need, many can leave the farms. The people can live together in cities. They can become specialists. Many goods and services can be produced.

Athens

Another old city that tells us a much different story is Athens. It is still a busy city today. People live and work all around the old heart of the city. This heart was the meeting place of the citizens long ago.

All around the meeting square were offices of government workers and businessmen. There were temples. There were workshops for all kinds of craftsmen. There was a farmers' *market*.

The citizens of Athens met in the square to listen to wise men and to discuss new ideas. People made speeches.

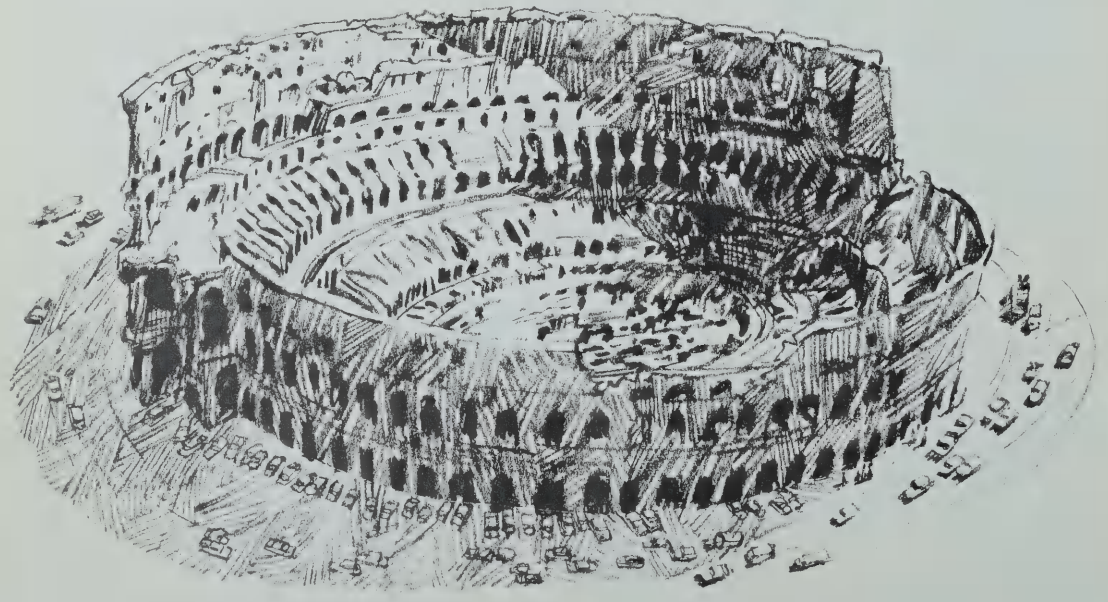
People argued. Crowds gathered around to ask questions. Many of the new ideas the people discussed became laws. The citizens made their own laws and ruled their own city.

The Athenians built beautiful temples. The sculptors made the gods of the Athenians look like beautiful human beings. The special goddess of Athens, Athena, was shown as a wise, just, and brave woman. The people tried to be like her in their deeds.

The land around Athens could not grow all the food the people needed. The people could not produce all the other goods they needed. They had to specialize in what they could produce best. Some Athenians specialized in growing grapes or olives. Some specialized in producing wine or olive oil. Some specialized in making jars. The Athenians traded these goods to other cities for what they needed.

The Athenians invited *foreigners* to be merchants and craftsmen in Athens. *Slaves* did many jobs. Because of this the Athenians had more time to spend helping their city.

Today many people study the ideas of the Athenians. We learn from the Athenians that it is important to care and work for our city.



Rome

In Rome we can see many ruins of the city's long past. The largest is the Colosseum. This huge round ruin stands in a swarm of cars and trucks. People rush past it. But hundreds of years ago the people of Rome rushed into the Colosseum to see free shows.

Roman soldiers helped make their city

the most important place in the world. They *conquered* many lands far from Rome. They built roads to join defeated countries to Rome. Many of the defeated people were hunters or villagers. These people had no cities. Roman engineers built hundreds of carefully planned cities. They laid out blocks of straight streets. Stone bridges were built across rivers. Water pipes, built on top of high stone arches, carried fresh water down from the mountains. There were public baths, theaters, and temples. Roman law, soldiers, engineers, and coins brought order and safety to daily life.

But something was wrong. In Rome there was not enough work. Work was not respected. Romans made slaves of people captured in war. Slaves did most of the jobs. Most of the free people were ashamed to work. Rome produced few goods. Most of the goods of the city came from captured countries. Small farms could not produce food as cheaply as the big farms where slaves worked. Many farmers lost their small farms and came to Rome for jobs. But they found no jobs in the city.

The rulers did not want the many people without jobs to make trouble. The rulers gave the people free bread to fill their stomachs. The rulers gave the people free shows to fill their time.

Rome did not know what to do about its problems. It grew weak. It was attacked and defeated.

Today Roman laws and language, bridges and roads are still used and admired. But the ruins of the Colosseum remind us that no city can stay strong if its people do no useful work. They must produce goods for their own needs and for trading.

Bruges

When Roman armies could no longer protect the cities they helped to build, enemies attacked them. Traders could not travel safely from place to place. People ran away from cities looking for safety. Many went to work as farmers on the lands of great *noblemen.* They grew their food on small pieces of a nobleman's land. They gave a large part of their crops to the nobleman as rent. The nobleman's army protected the farmers on his land. The soldiers lived inside the nobleman's castle, which was called a *burg.* If the farmers were attacked, they could go inside the castle until the soldiers drove off the attackers.

One group of noblemen were the counts of Flanders. They lived in a burg. Many *weavers* lived near the burg. Since this burg was on a river near the ocean, traders could reach it easily. The fame of the weavers' good cloth spread everywhere. More and more merchants came to buy from them. A city began to grow up outside the walls of the old burg. It was named Bruges. Shoemakers and tailors, butchers and bakers all came to do the work of the city.

In the countryside the farmworkers lived like slaves. Many of them ran away to the city. If the landowners could

not catch them within a year and a day, they were free. They learned the jobs of the city and joined the craftsmen working there.

The city grew. Merchant ships from all over the world brought wool, food, wine, and gold to trade for cloth.

The counts of Flanders collected *taxes* from all the traders. They became richer than many kings. The merchants and craftsmen grew rich too. They joined groups called *guilds*.

There were guilds for merchants, for painters, for bakers, for weavers, and for many other craftsmen. The guilds made sure that their members produced only goods of fine quality.

When the counts did not do what the people wanted for the city, the people had to solve the problems themselves. They taxed themselves and used the tax money to hire workers to build bridges and walls. The workers repaired docks and cleaned the streets.

When people wanted new laws made, the counts let them make their own laws. They governed themselves.

The men of Bruges built a strong city. They proved that men could rule themselves wisely.

Manchester

Once there was a pretty little town in England called Manchester. It also had famous weavers. But weaving machines were invented that could do the weavers' work faster than ever before. Then the *steam engine* was joined to these weaving machines. Great amounts of cloth could be made very fast.

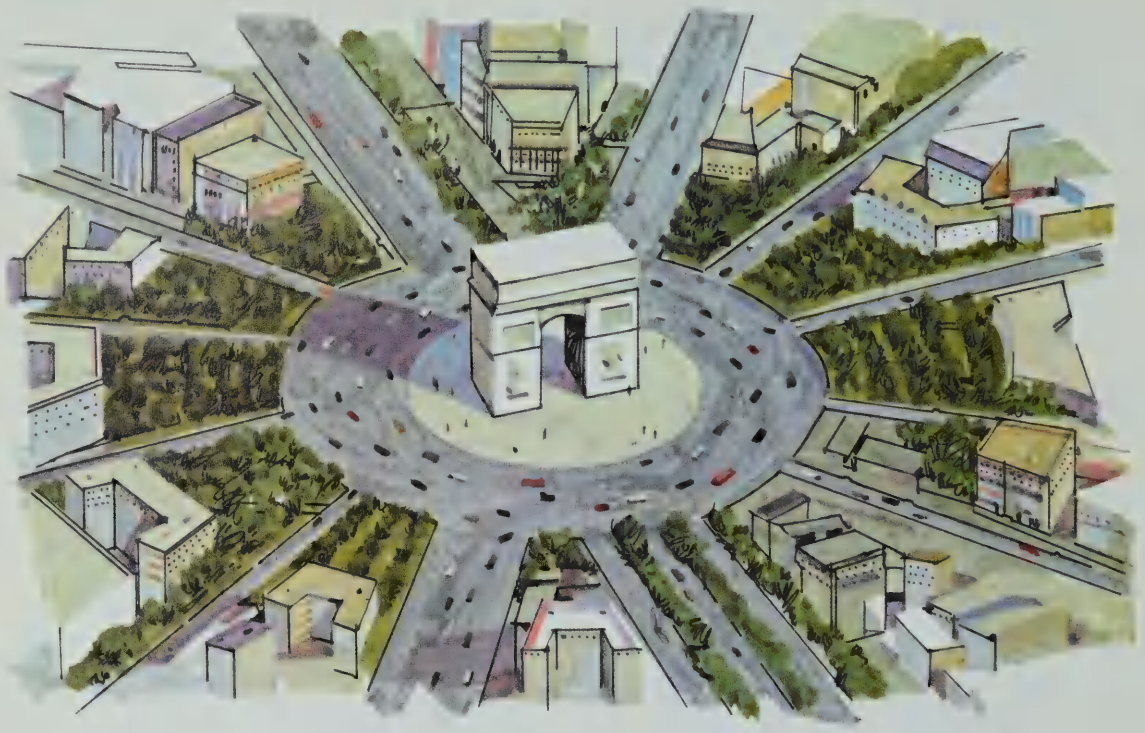
The work could no longer be done in the weavers' homes. The machines were too big. Hundreds of workers were needed to run them. Big buildings were needed. They were called factories.

Manchester was a good place to build factories. There were coal mines nearby. Coal was used to run steam engines. Canals were built so that boats could carry the coal to the factories.

Many people came to work in Manchester. They learned to run the machines and soon the city was producing cloth for the whole world. Cloth made by machines was cheaper than handmade cloth. More people could afford to buy and use Manchester cloth than ever before.

As the city produced more and more cloth, something happened to Manchester. Houses for the workers were built very fast. No time or money was spent to make them comfortable or safe. Families and strangers crowded together in small rooms. The factory workers had to work many long hours, six days a week. Even small children had to work. Smoke from the roaring factory chimneys turned buildings black. It killed the trees and flowers, and made people sick. Factory wastes floated in the canals. Manchester became ugly.

Manchester did make better goods for the world. Manchester gave jobs to many people. But Manchester did not make life good for the people who did the work. Cities must care for the people who live in them.



Paris

Paris is a city that stands for beauty. Today broad avenues cut across the city. Along these great avenues are trees, splashing fountains, and grand statues. Hundreds of Parisians and visitors walk along the avenues, enjoying the beautiful city.

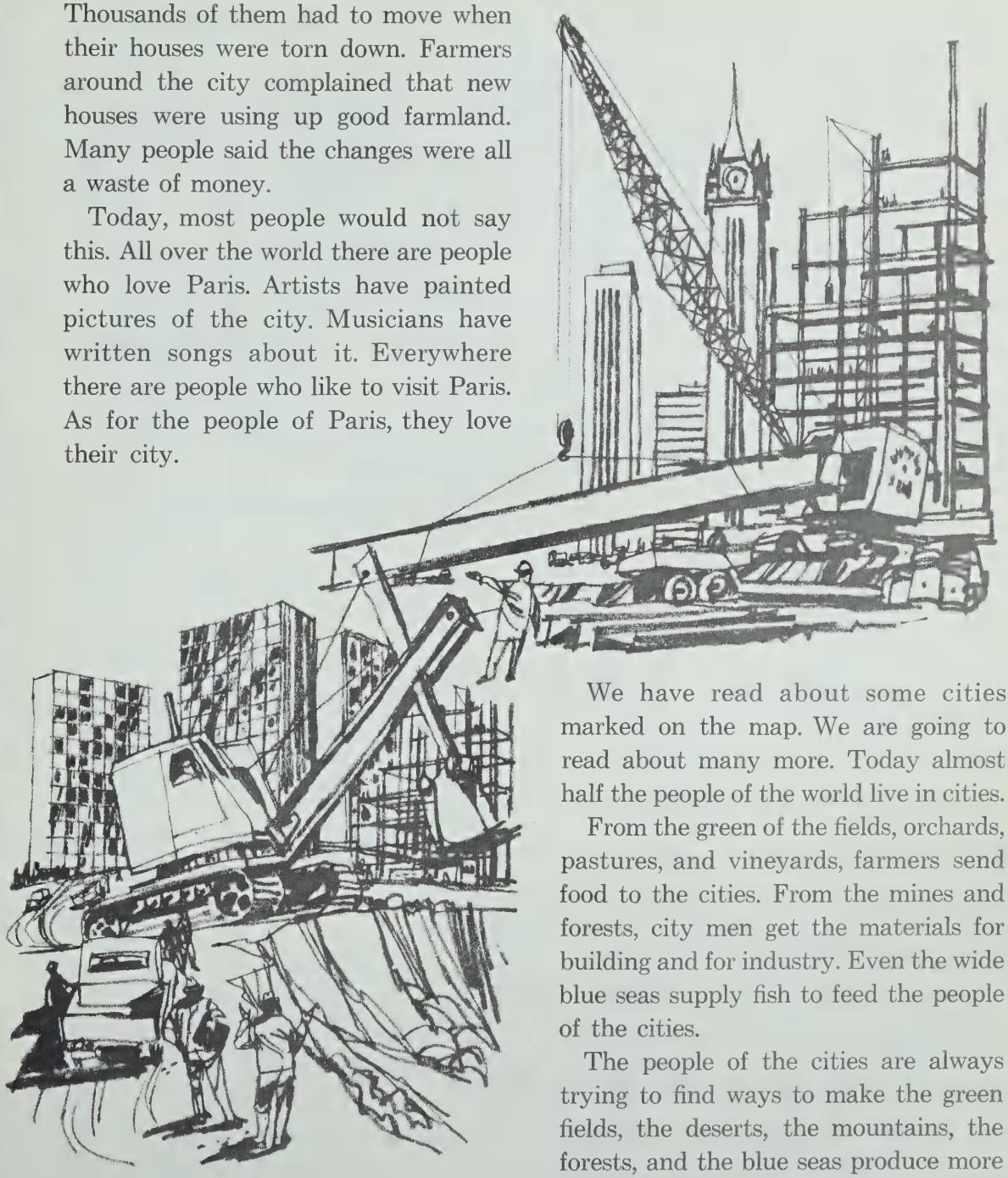
Once Paris was a jumble of dark, narrow, crooked streets. There were beautiful palaces and monuments in them, but they were hidden.

About a hundred years ago Paris was ruled by an *emperor*. He wanted the world to know that he was able to do great things. He asked one of his government officials to plan and build a new Paris.

This government official hired engineers, architects, gardeners, and workmen. They cut through the narrow streets to build broad new avenues. Now the palaces and monuments could be seen. The workers made great parks and small ones. They brought flowers and trees from other countries and planted them. They built roads that helped farmers get to the market easily. They built a new market building of glass and iron. They brought more fresh water to the city. Huge sewers to take out wastes were built. Beautiful lamps lit the avenues at night. In the daytime sunlight filled all the open spaces. Paris became a beautiful city of light.

But many Parisians complained. Thousands of them had to move when their houses were torn down. Farmers around the city complained that new houses were using up good farmland. Many people said the changes were all a waste of money.

Today, most people would not say this. All over the world there are people who love Paris. Artists have painted pictures of the city. Musicians have written songs about it. Everywhere there are people who like to visit Paris. As for the people of Paris, they love their city.



We have read about some cities marked on the map. We are going to read about many more. Today almost half the people of the world live in cities.

From the green of the fields, orchards, pastures, and vineyards, farmers send food to the cities. From the mines and forests, city men get the materials for building and for industry. Even the wide blue seas supply fish to feed the people of the cities.

The people of the cities are always trying to find ways to make the green fields, the deserts, the mountains, the forests, and the blue seas produce more food and *raw materials* for the cities that are growing, growing, growing.

What Is a City?

LESSON 1

The city is a special feeling

"How do you do? My name is Doris Stein. I'm from Los Angeles."

"Hello. I'm Jack Stevens, of Cleveland."

"Good morning. My name is Larry Ortiz. I was born in Dallas."

Strangers often introduce themselves this way. Each one has a special feeling about his city. Sometimes the feeling comes from being proud of a city's baseball team, or the story of its past, or its beautiful buildings.

Sometimes the feeling comes from pride in a city's *landmarks*. Many San Franciscans are proud of their Golden Gate Bridge. Many New Yorkers are proud of their skyscraper skyline. Many Chicagoans are proud of their long shoreline on Lake Michigan.

The city is a big workshop

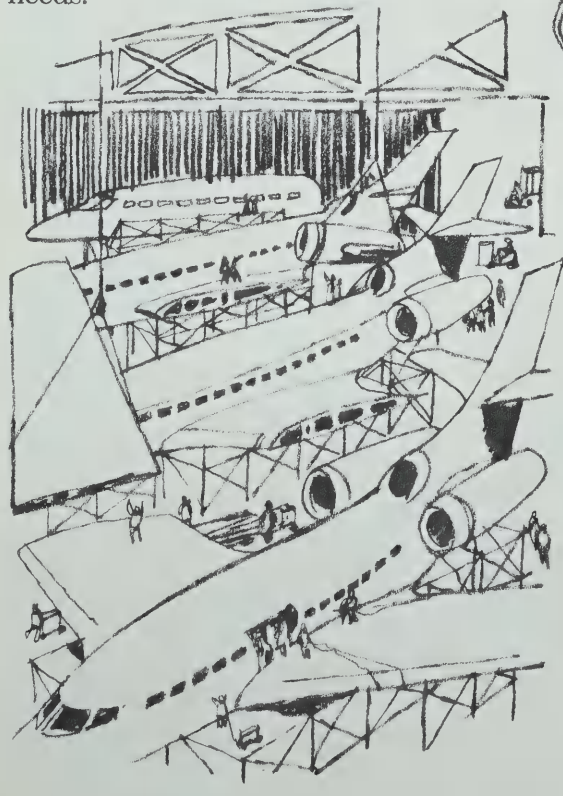
Trains, trucks, airplanes, and ships bring raw materials, tools, and machines to the city from all over the country and the world.

With these things men have built shops and factories, stores and offices, to produce the many goods and services that people want.

The place where men have come together to produce these things is their city.

Many goods and services are produced in every city.

Every city produces haircuts and shoeshines, taxi rides and car repairs, loaves of bread and daily newspapers. But no city can produce everything it needs.



Cities, like people, specialize in producing goods and services.

Some cities specialize in only one good or service. There are mining cities, college cities, steel cities, vacation cities, and government cities.

Many cities specialize in only a few goods and services. Some cities produce a great many goods and services. Such cities may produce dozens of things, from jet airplane engines to jelly beans.

All cities trade the things they can produce best for the things they need from other cities.

The city is a trading place

People in cities trade some of the goods and services they produce for raw materials and food from the *countryside.*

City people live and work in a world of brick, steel, stone, and glass. You will not see cattle grazing in parking lots. There are no apple trees blooming in the department-store windows, or oil wells pumping in the subways. But city people have meat, fruit, and fuel. City people buy these things from the countryside.

With the income they earn, the people of the countryside buy goods and services from the cities. Trucks and tractors, television sets and tables go to the countryside from the cities.

The tractor in a farmer's field may come from a factory of the city. The shirt on a cotton farmer's back may come from a shirt factory of the city.

Cities also trade with other cities all over the United States and around the world. Trucks and trains and planes move goods between our cities. Ships and planes carry our goods to cities in other countries. They come back with raw materials, cars, cameras, watches, radios, silks, dishes, foods, and hundreds of other things city people want.

How is all this trading done? Some of it is done by telephone, telegraph, and letters. Buyers and sellers who trade this way do not have to meet. But much of the trading is done in places where buyers and sellers come face to face. This happens when shoppers buy goods in stores.

Some businesses sell goods to stores only. There are showrooms where buyers from stores can look at the new goods that factories produce. The buyers order

the things they think their customers will buy.

There are huge markets where sellers show tomatoes or roses or pork chops to buyers from food or flower stores.

The city is a place of many specialists

In cities people divide the labor to produce goods and services. The division of labor makes people specialists.

In the factories there are engineers, janitors, and mechanics. There are guards, timekeepers, and all the workers who run the machines.

In the offices there are secretaries and bookkeepers. There are the businessmen who plan new products and plan the best ways to produce and sell them.

There are many specialists in the city who advise the businessmen. There are bankers, lawyers, engineers, architects, and advertising specialists.

There are specialists who help other specialists to find jobs.

There are many kinds of specialists who produce services for the city. Grocers, bus drivers, salesmen, doctors, milkmen, mechanics, and many others all produce important services.

Some specialists work for the city government. There are clerks, teachers, policemen, firemen, inspectors, and tax collectors.

Some of the city's specialists were born in the city. Others came from the countryside, from other cities, or from other countries.

The city is a place of many ideas

Because city people come from many different places, they have many different customs and ideas.

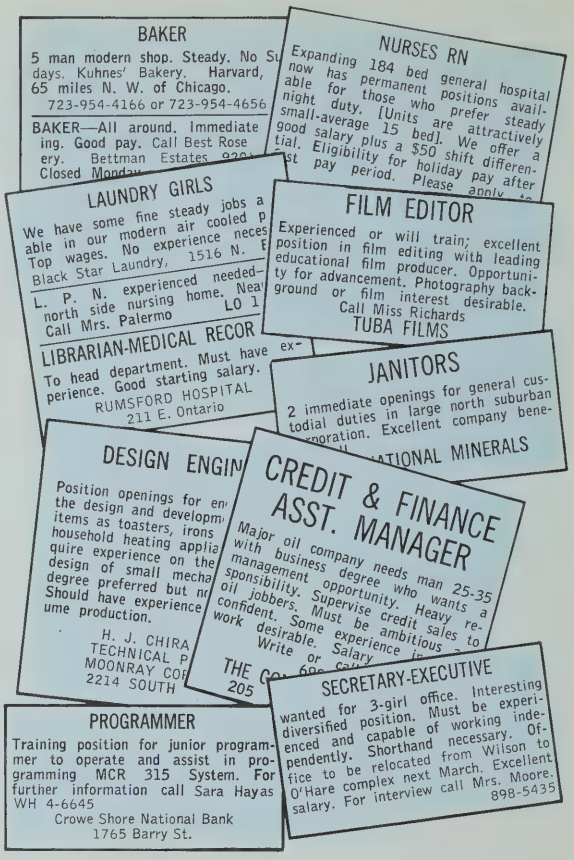
People with different ideas meet and talk to each other in the city. They exchange their ideas. In this way, ideas grow and new ideas are born.

The offices, schools, theaters, and governments of cities need people with ideas. Because of this, people with ideas come to the city from all over the country and the world.

The city is a place of many choices

Because of the division of labor in the city, there are many kinds of jobs to be done. In the city, people can choose the jobs that fit them best. They can be dishwashers or pilots, dancers or pickle packers. There are schools in the city that teach people how to do all kinds of jobs. There are schools for barbers, artists, tailors, printers, actors, hotel managers, public speakers, and maybe for pickle packers.

There are many kinds of things to buy in the city. People can choose what they like and what they can afford. There are stores that have hundreds of suits and dresses. Many of the suits and dresses are alike. They have been produced in large numbers. The prices are not high. Many people can afford to buy them. There are stores where each suit or dress is made just for the person who will wear it. Such clothes are expensive. Only a few people can afford to buy them.



There are outdoor stands where you can buy hotdogs at a low price. There are beautiful restaurants where food is prepared by famous cooks. There, the prices are high.

City people can ride to work in a taxi or in a bus. City people who like music can sit in the park to hear a free concert. Or they can pay to sit and listen in a great music hall.

Most cities have museums, zoos, gardens, libraries, theaters, and lecture halls. Many of these are free.

City people can choose from many ways to earn *income*, to spend income, and to spend free time.

The city is many neighborhoods

Every home in the city is in a *neighborhood.* City neighbors often do not know each other as well as neighbors in small towns. City people often go to other neighborhoods to work or to visit friends, to shop or to enjoy themselves. Fast city transportation makes it easy to travel between different city neighborhoods. City people also move often. People come to cities from many parts of our country and from other countries. Often people with the same customs or beliefs live in the same neighborhood. Sometimes people of the same race live in the same neighborhood.

Children of these neighborhoods go to the city schools. They learn the customs and the jobs of the city. When these children grow up many of them leave the old neighborhood. They often go to live in other neighborhoods they like and can afford.

Sometimes the people of a neighborhood do not welcome newcomers. The newcomers may be different from themselves.

But in many cities there are laws that say people have a right to live in any neighborhood they like and can afford.

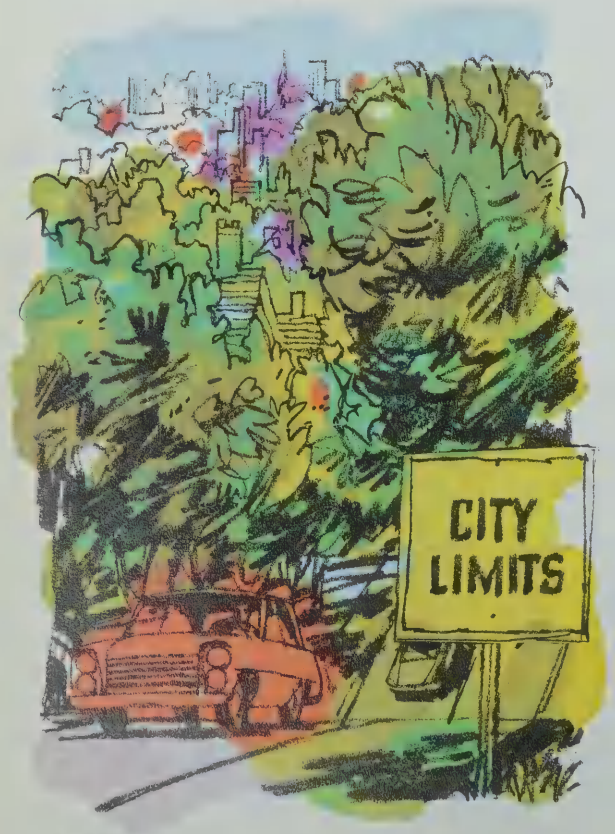
The city is a land area

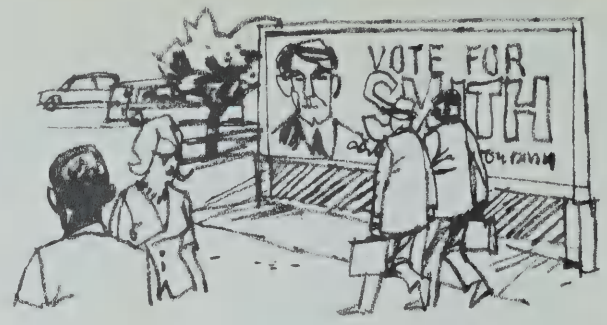
The size of the city depends on the *area* of land on which it is built. The size of the land is marked by the city *boundary*.

City land is used in many ways. It is used for houses and apartments, for offices and factories, for parks and pools, for theaters and stores. It is used for streets, subways, and sewers.

Many things affect the way city land is used. Some of these things are the price of the land, the wants of the people, and the laws of the city.

The way city land is used affects the number of people who can live in the city. It affects the beauty, safety, and health of the city.





The city is a place with a government

The people of the city make laws. They make laws through the lawmakers they have *elected*.

Some laws help cities to grow. Other laws help people get and keep jobs, or take care of needy people. Some laws help people to get a better education and enjoy better health.

The city is a place that keeps changing

Cities change with time. Buildings and neighborhoods get older.

Cities also change when old buildings and neighborhoods are torn down to make space for new buildings.

Cities change as more people come to the city. Taller buildings are built in the heart of the city for offices and apartments. Because land gets more expensive in the center of the city, more people and factories move to the *suburbs*.

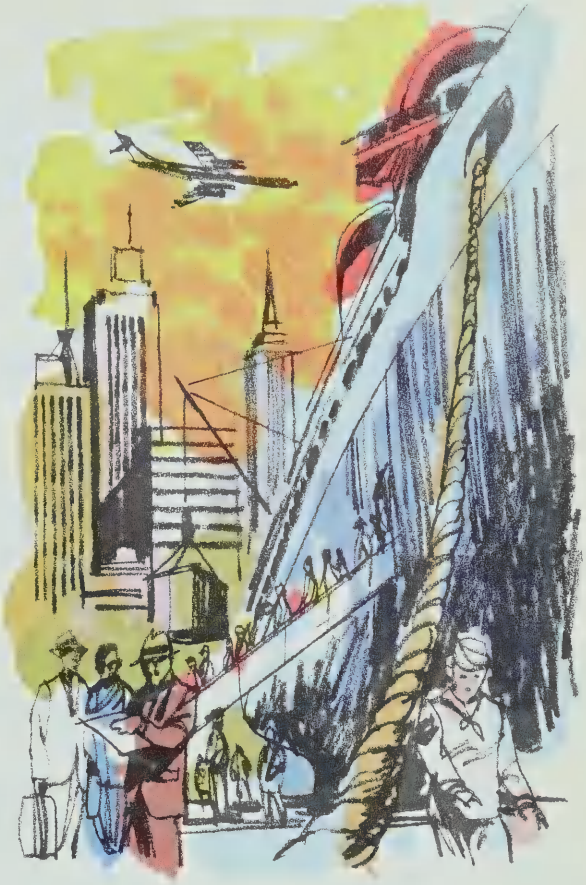
Because people use more cars, streets are made wider. Traffic laws change. New express highways and parking lots are built in the city.

The city changes because people's ideas about the city change. Sometimes city people decide that children need more places to play. They may vote to change a block of old buildings into a playground. Sometimes city people decide that needy people must have clean, new places to live even if they cannot afford them. They vote to tear down old neighborhoods and build new ones for these people.

Sometimes it is hard to decide on changes. Different people want different changes. Some people like one change but do not like another. Some people want no changes at all.

Often, people do not agree on what to do. They vote on the different ideas. The idea that gets the most votes becomes a law.

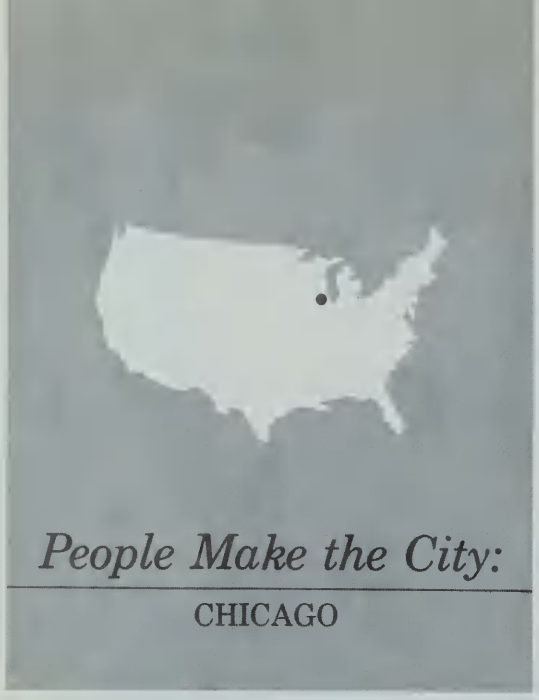
Laws made by the people elected in the cities, the states, and the United States affect the well-being of the cities.



The city is a magnet

Many people from farms, small towns, and other countries come to the city. They hope for a better life. In the city they have many choices that make their lives better. But to make the best choices, they must understand their city. The more people know about their city, the better they are able to find good jobs and good friends. The more people know about their city, the better they can spend their time.

People who know their city well have the best chances for a good life for themselves and their children.

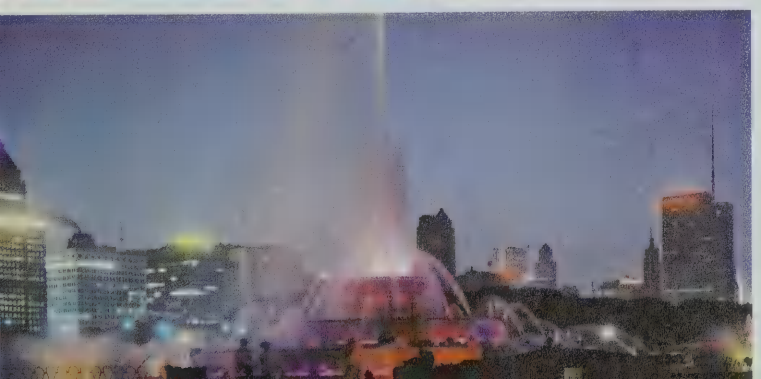


People Make the City:

CHICAGO

A city without people would only be a pile of stones, a heap of bricks, a clutter of lumber. Men make a city a living thing. They make the city good or bad, interesting or dull.

Chicago is a city. It is a great, busy city that rises from land that was once a sticky swamp. Like most great cities, it has many faces. It has tall buildings whose tops seem to ride in the clouds. It has giant factories and small workshops. It has one-story houses and huge apartment buildings. It has beautiful parks and beaches, and miles of ugly streets.




ENS

Chicago's people have come from every part of the world. They are still coming. They come from countries across the oceans and from the cotton fields of Alabama. They come from the coal mines of Kentucky and from the sugarcane fields of Puerto Rico. They come to Chicago for better jobs. They come with hope for a good life for their children.

Once there were forests and Indians and wild animals where Chicago stands today. Fur traders came. Then the United States government built Fort Dearborn where the Chicago River flowed into Lake Michigan. Indians attacked the fort and burned it.

Photo courtesy of Chicago Historical Society

Fort Dearborn in 1803

A few years later a new trading post was built. A town began to grow around it. The town became Chicago. It became a stopping place for people going west. Wagon trains rolled through Chicago's muddy streets. Stores and hotels were built for the people moving west.

By the time the children of the first settlers had grown up, railroads were being built. Soon Chicago became the greatest railroad center on earth. Men used their savings to open stores and build factories. Men with strong hands did the hard work that needed to be done.

The trains brought more people to Chicago. The town became a city.

One day a fire broke out in the city. When the fire was finally put out, more than one-third of the people had lost their homes. The business district with its stores and hotels was a smoking ruin. Some people said that Chicago would never rise again. But Joseph Medill, owner of one of the city's newspapers, knew better.

He said, "Chicago still exists. The city was not just a collection of stone and bricks and lumber."

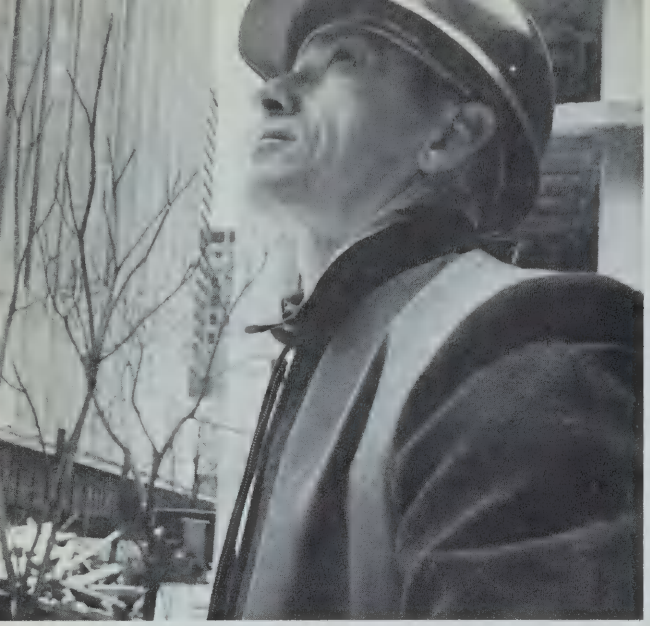
The people of Chicago agreed. "Chicago is still very much alive. We'll build again. And better!"

The people got down to the hard work of building their homes and shops again. And they did build better.

Chicago has grown into one of the great cities of the world. In our country today, Chicago is well known for the way its people care about their neighborhoods and their city.

A city that people care about is a good and lively city to live in.

Let's look at a few of these Chicago people. . . .



Frank Kranz builds for a changing city . . .

FRANK KRANZ helps Chicago change. He is one of the thousands of men who build new apartments, offices, and houses. His work is hard and sometimes dangerous. But he loves to stand high above the city on the open deck of a new skyscraper.

Mr. Kranz is proud that his hands have helped put together many of Chicago's great buildings. Every time you see Chicago's skyline, you see buildings that he has worked on.

The first skyscraper was built in Chicago not long after the big fire. Chicago architects were the first to use iron and steel to build very tall buildings with big windows. Many people visit Chicago today to see those first skyscrapers. They also come to see the interesting new buildings that Mr. Kranz is helping to build.

He and the men who work with him belong to a *union*. Union leaders talk for the workers with the companies about wages and working conditions. Mr. Kranz thinks that the union helps make his job a better one.

After work he spends most of his free time with his wife, Helen, and their children, Paul and Karen. They own their own home on Chicago's Southwest Side. Mr. and Mrs. Kranz grew up nearby. They like the old neighborhood and they work hard to keep their house and yard nice.

. . . but his own neighborhood is much the same as when he grew up there.

Mrs. Kranz finds time to serve as a Girl Scout leader for Karen's troop.

She usually shops in her neighborhood. When she needs something special, she takes a bus downtown. There she compares goods and prices at many of the big department stores and shops. There is so much to choose from that shopping is an adventure.

The family goes to church every Sunday. Afterward they meet many of their neighbors outside. Many of their neighbors come from Poland as Mr. and Mrs. Kranz's parents did. Mr. and Mrs. Kranz have taught their children much about Poland. Sometimes Karen does Polish dances at neighborhood parties. Her mother keeps up the Polish custom of sewing lovely robes for religious statues.

It is Paul's birthday. Paul and his friends can hardly wait to eat the cake.

Karen wears a Polish dress made by her mother.

The Kranz family enjoys visiting places like the Field Museum.

The Kranz family likes to visit the city's many museums and parks. Karen and Paul especially like the Field Museum, where they can see all sorts of things from dinosaurs to Indian arrows to Eskimo boats called kayaks.

JORDAN HOLLANDER is a Chicagoan who helps put bread and cereal on your table. He is a *cash grain broker* at the world's largest grain exchange, the Chicago Board of Trade.

Every weekday morning he stands by a small table crowded with sample bags of grain. At 9:30 a big gong sounds the opening of trading. Mr. Hollander's phone begins ringing right away. In the next few hours he may have as many as 100 phone calls. Most of the calls are from men who own large *grain elevators* within 350 miles of Chicago. They want Mr. Hollander to sell their grain. He tells them the prices being offered and advises them when to sell.

The telephone plays an important part in Jordan Hollander's fast-moving work as a grain broker. The bags on the table contain grain samples.

The hands speak in the Chicago Board of Trade. Shouting and signaling, these men buy and sell grain for delivery in the future.

Other traders, working for buyers, look at the sample bags. These samples are taken from boxcars full of grain arriving in Chicago's railroad yards. The traders want to see for themselves how good the grain is. The price offered for the grain depends on how good it is and how much of it is for sale.

Before the day is over, Mr. Hollander may have sold grain to make bread and rolls in Chicago, and grain to be sent to countries overseas. As pay for his services, he receives a part of the price of the grain that he sells. This is his income or *commission.*

Trading closes early in the afternoon. Mr. Hollander usually takes a bus or taxi home from La Salle Street. But on nice days he walks up Michigan Avenue with its many fine shops. He passes the spot where Fort Dearborn once stood.

Mr. Hollander sometimes walks home. He passes the spot where Fort Dearborn once stood.

Mr. Hollander lives with his wife, Blossom, and their children, Glenn and Wendy, in an apartment on the North Side near Lake Michigan. They like being near the lake and the miles of parks and beaches that stretch along it.

Within walking distance of their apartment are harbors for sailboats, tennis courts, ball fields, and even a golf course.

At home Mr. Hollander and his family enjoy the paintings and statues he has collected. Many of them are the work of Chicago artists. Mr. Hollander also likes to visit the Art Institute of Chicago

The Hollanders at home.

where there are famous works of art from all over the world.

Because of their interest in art, Mr. and Mrs. Hollander have become good friends with many artists. That is one of the things they like most about living in the city—they meet so many people with different jobs and ideas.

They are also interested in their neighborhood and its schools. Mrs. Hollander belongs to the local PTA. Mr. Hollander belongs to a group of people who work hard to improve their neighborhood.

Mr. Hollander enjoys his visits to the Art Institute.

Wayman Ward works in this neighborhood.

WAYMAN WARD works in another part of Chicago. His work takes him to the city's poor and run-down neighborhoods.

He knows that many people in Chicago have too little schooling. Some cannot read or write very well. They have a hard time getting jobs. They cannot earn enough to take care of their families. Often they must live in crowded, run-down buildings. Their children may never have seen a zoo or a museum.

Mr. Ward works for the War on Poverty. This is a program started by the United States government to help the poor make their lives better. The government pays him and his fellow workers. But the city's government plans its own program.

Urban progress centers are an important part of Chicago's program. Mr. Ward is in charge of a center on Chicago's West Side. He was chosen for the job because he had the education needed, and because he works well with different people.

Working with children is just part of Mr. Ward's job. Mr. Ward explains that it is dangerous to eat paint.

Mr. Ward has many people working with him to keep the center open every day. Some of his workers have been poor themselves. They were hired because they know their neighborhood and its problems. Without these workers, his job would be much harder.

Mr. Ward and his workers help young people find jobs. They show mothers how to sew and cook, and teach them ways to save money. They take boys and girls on trips to the zoo and parks. These are just a few of the many things they do.

Mr. Ward likes his job very much. It is exciting to see people taking their first steps on the road to a better life.

He lives with his wife, Juanita, and their two sons on the far South Side. They have a fine home in a nice neighborhood. Mr. Ward and his sons have fun fixing up old furniture in their basement workshop.

But he knows that not everyone is so lucky. That is one of the reasons he checks on his boys' schoolwork. He wants them to do well in school and be able to study at one of Chicago's fine colleges as he did. He wants them to have interesting jobs when they grow up.

The whole city, rich and poor, must eat. Yet hardly a scrap of food is grown in Chicago, where more than three and one-half million people eat breakfast, lunch, and dinner every day. How does this huge amount of food get to the restaurants, groceries, and supermarkets where Chicago's citizens can buy it? Men like CHRIS PARENTI know the answer.

Chris Parenti checks vegetables as they arrive.

He works at the South Water Market. In the middle of the night, while most of Chicago sleeps, trucks and trains from farmlands across America are bringing food into the city. Fresh fruit comes from Florida and Texas. Potatoes, onions, corn, and beans come from the rich fields of the Midwest.

Mr. Parenti is a *wholesale dealer*, one of many at the market. The food is delivered to these dealers. They sell it to grocers and restaurants. They are the link between the farmer and the storekeeper. Without them it would be almost impossible to feed a city the size of Chicago.

Trucks bring in food from all over the country.

Mr. Parenti is at work long before the sun rises. He opens his office about three o'clock in the morning. He watches his men unload the trucks, and checks to see how good the food is. Soon buyers arrive. They may be neighborhood grocers come to do their own buying. Or they may be buyers for a big chain of supermarkets.

The buyers hurry from dealer to dealer, comparing goods and prices. They want to find the best price for the best foods before they buy. Sometimes they

After the food arrives, Mr. Parenti will be kept busy most of the morning bargaining with buyers.

bargain with the dealers to get a lower price.

By noon the market begins to quiet down, and Mr. Parenti gets a chance to catch up on his office work. Late in the afternoon he closes up and heads for home. The city will eat for another day.

Mr. Parenti's job calls for great skill. He must know fruit and vegetables as well as a farmer does. He must know about weather and crops all over the country. A frost in Florida can spoil many oranges. The price of oranges would be higher. This is because prices depend on how much fruit is grown.

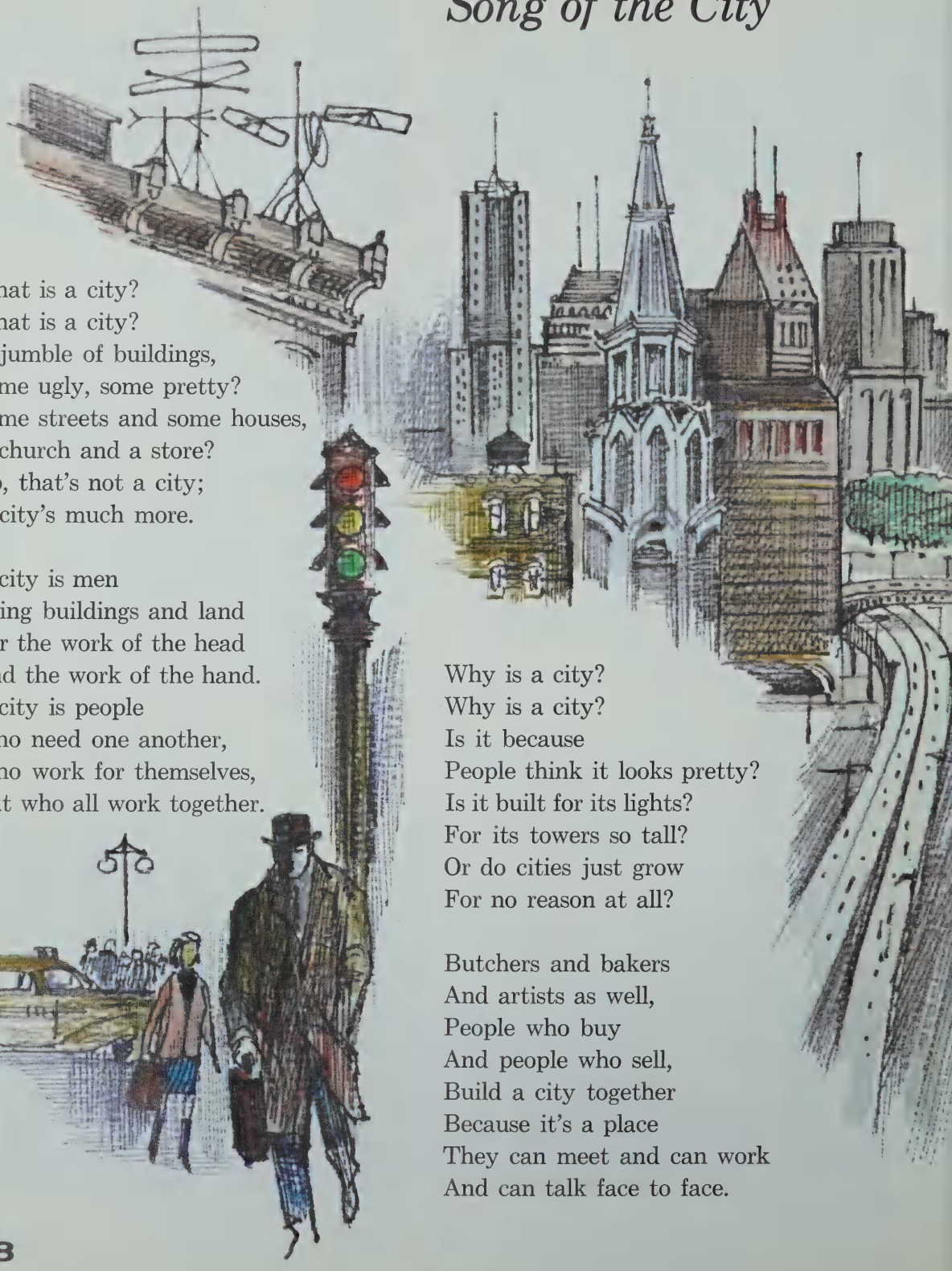
He must also be a good salesman who can deal with many different customers. He must be a good manager so that his company makes a *profit*. His income depends on how much profit the company makes.

When Mr. Parenti was a boy, times were bad. His father was a construction worker like Mr. Kranz. Not many buildings were being built. His father

could get no work. So when Mr. Parenti was thirteen, he got a job at the market to help his family. That was more than thirty years ago. He became a dealer after working at many different jobs in the market. He has worked at the market ever since.

These are only a few of the people who make Chicago what it is. There are millions of others—people with many different jobs. People from many different neighborhoods. People with many different ideas about how to work and enjoy themselves. It is such differences that make a big city like Chicago an exciting place to live.

Song of the City



What is a city?
What is a city?
A jumble of buildings,
Some ugly, some pretty?
Some streets and some houses,
A church and a store?
No, that's not a city;
A city's much more.

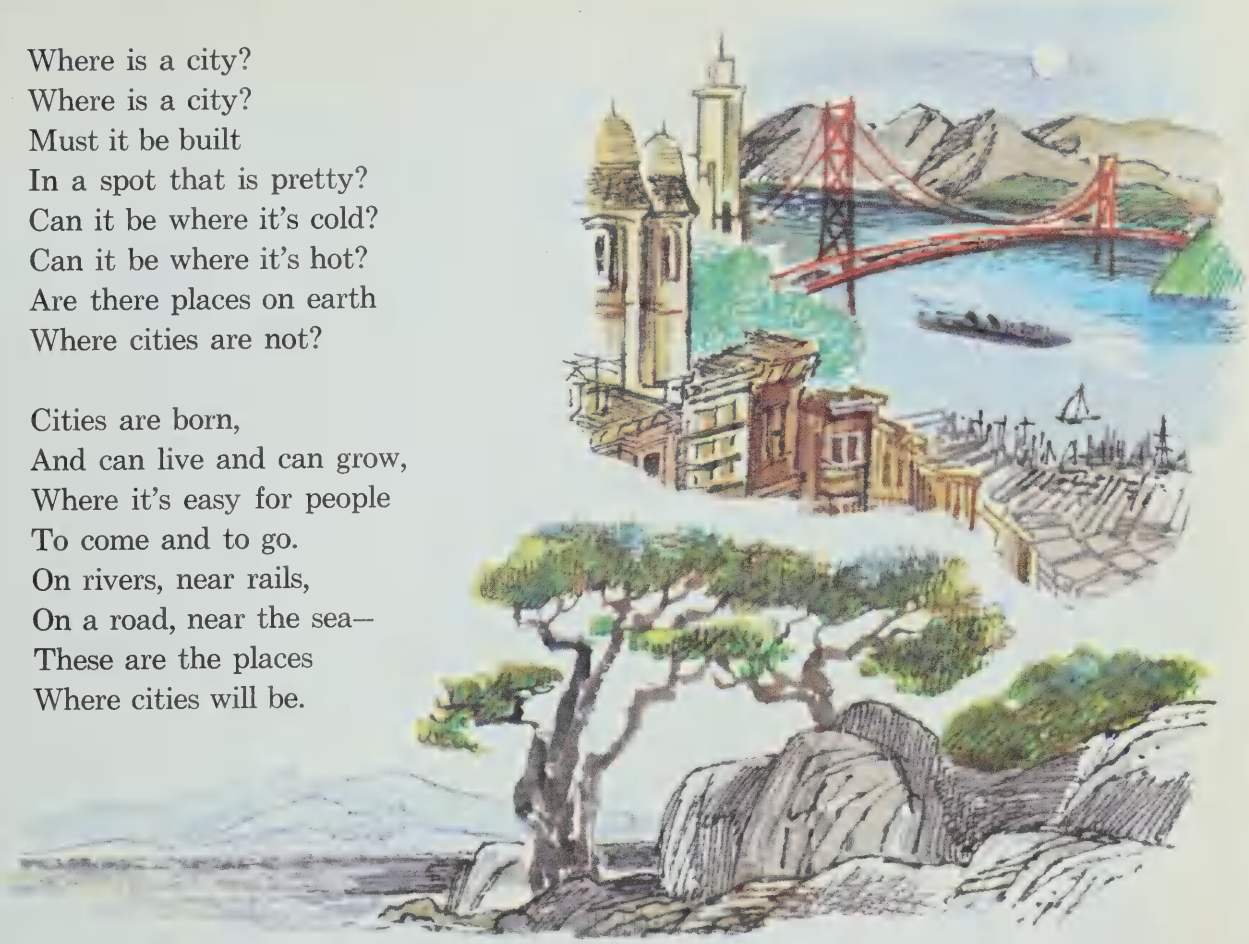
A city is men
Using buildings and land
For the work of the head
And the work of the hand.
A city is people
Who need one another,
Who work for themselves,
But who all work together.

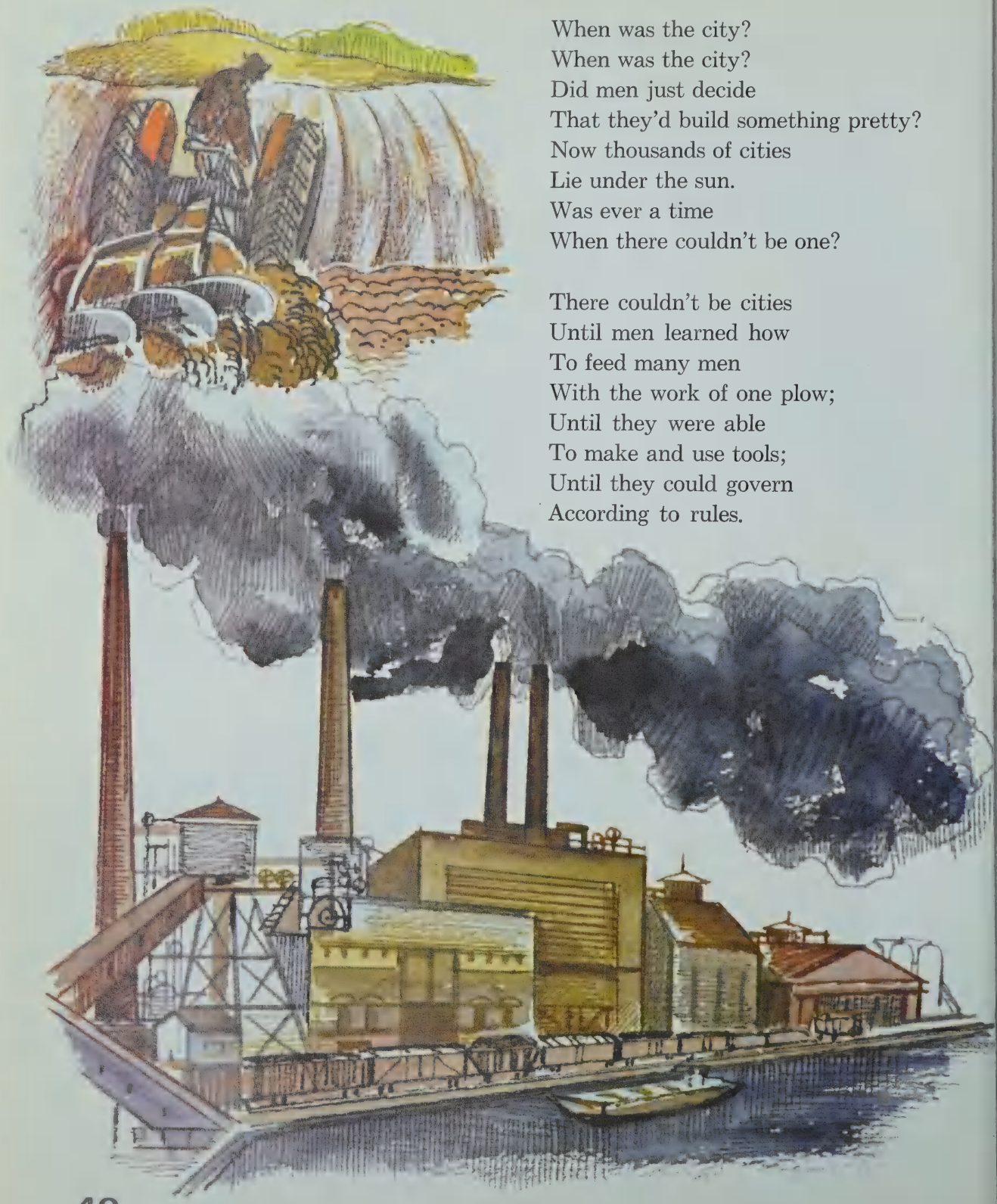
Why is a city?
Why is a city?
Is it because
People think it looks pretty?
Is it built for its lights?
For its towers so tall?
Or do cities just grow
For no reason at all?

Butchers and bakers
And artists as well,
People who buy
And people who sell,
Build a city together
Because it's a place
They can meet and can work
And can talk face to face.

Where is a city?
Where is a city?
Must it be built
In a spot that is pretty?
Can it be where it's cold?
Can it be where it's hot?
Are there places on earth
Where cities are not?

Cities are born,
And can live and can grow,
Where it's easy for people
To come and to go.
On rivers, near rails,
On a road, near the sea—
These are the places
Where cities will be.





When was the city?
When was the city?
Did men just decide
That they'd build something pretty?
Now thousands of cities
Lie under the sun.
Was ever a time
When there couldn't be one?

There couldn't be cities
Until men learned how
To feed many men
With the work of one plow;
Until they were able
To make and use tools;
Until they could govern
According to rules.

How is a city?
How is a city?
Why are some ugly
And why are some pretty?
How can our cities
Be splendid and gay—
A pleasure to live in?
Tell us the way!

If cities will be
Rich, exciting, and bold,
Using and treasuring
New things and old,
Safe, pleasant places
For work and for play,
The people who live there
Must make them that way.

Why a City Is Where It Is

LESSON 2

We know that there are places on the earth that are crowded with cities. In other places the cities are far apart. Why did men build cities where they did?

Cities are built where men can work and trade

Do you remember Babylon? It was a city by a river. The river was used for *irrigation* and *transportation*. Rich land lay around the city. The land was good for farming. The farmers produced more than enough food for themselves. What food they did not eat they traded for goods made by the city people. The city people used the river to carry goods to and from other cities.

Do you remember Athens? The city was built near the sea. The sea was Athens' road to the outside world.

Rome was built on seven hills. It was near a river, not far from the sea. An island in the river made it easy to cross. The road built across the river was very important. To the north it led to good farmland. To the south it led to places where there were *minerals*. Rome needed both food and minerals to grow.

Bruges grew into a city because people moved there to be protected from enemies. It grew larger when it began to trade. The river and the sea connected Bruges with the world.

Manchester became a big factory city

because of nearby coal mines, rivers, and canals. Coal was needed to run the steam engines. Steam engines ran the factory machines that were used to make cloth. The rivers and canals were used for transportation.

The city of Paris started on a river island where people could be safe from attack. The river was also useful for transportation.

All these cities grew where the people could work and trade. Some of these cities grew where nature protected them from enemies. Later, men invented new *weapons*. Swamps, mountains, and rivers no longer protected the cities.

What do cities need?

Many things must be brought together if a place is to grow into a city.

Cities need raw materials.

Cities need skilled workers.

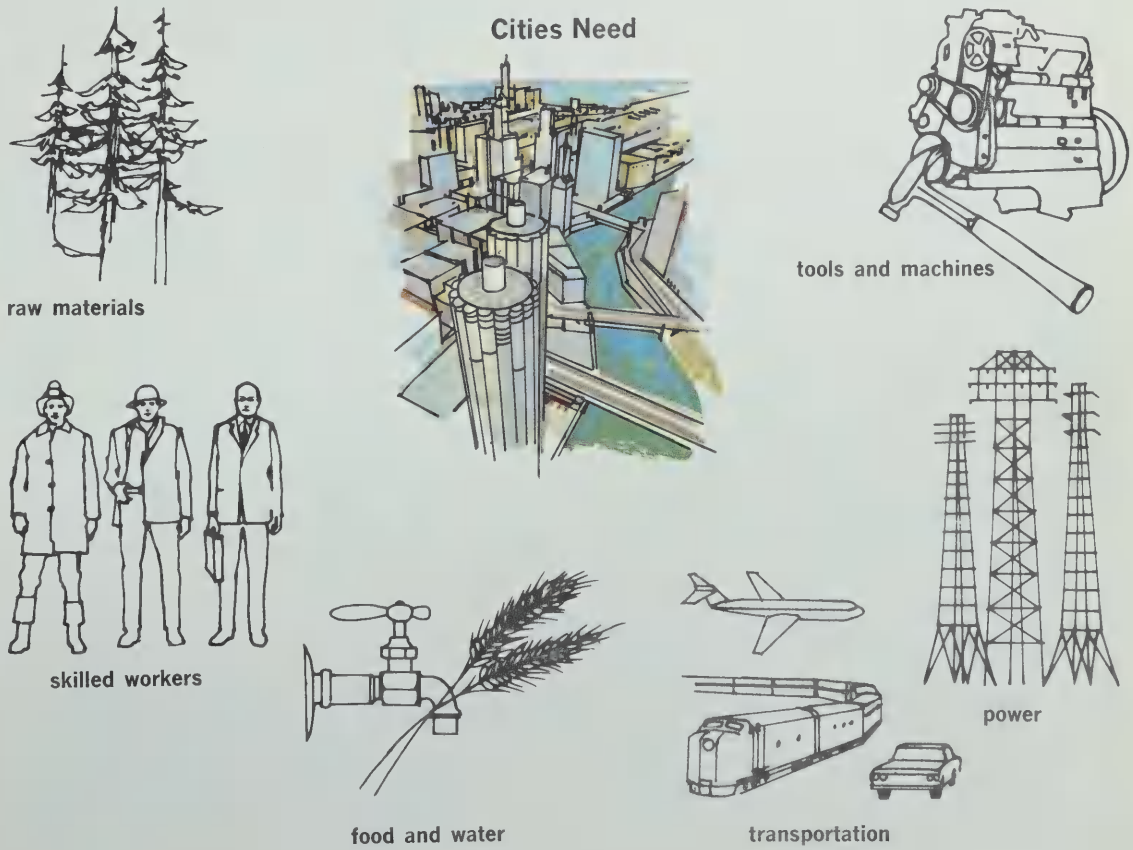
Cities need food and water.

Cities need tools and machines.

Cities need ways of getting power.

All these things are needed to produce goods and services. City people need these goods and services for themselves and for trading.

But all these things cannot be found easily in one place. They must be brought together by ships, airplanes, trucks, and trains. So cities need transportation.



Our first cities were close to waterways

Over two hundred years ago the United States had no trains or trucks or cars or airplanes.

The early settlers of the country came by ship and built their homes near harbors. The first cities grew up along the sea. Some of these cities started where rivers joined the sea. The people of Boston, New York, and Charleston traded the raw materials of America for the finished goods of Europe.

As people moved west, cities started up along rivers and where rivers came together. People used the rivers for trade. Flatboats brought farm goods down the rivers to these young cities. The farm goods were traded for goods produced in the cities.

Later a few roads were built. Horses pulled wagons and stagecoaches. But roads were poor. It was hard to trade by land. Sending goods by boat was faster, easier, and cheaper than by land.

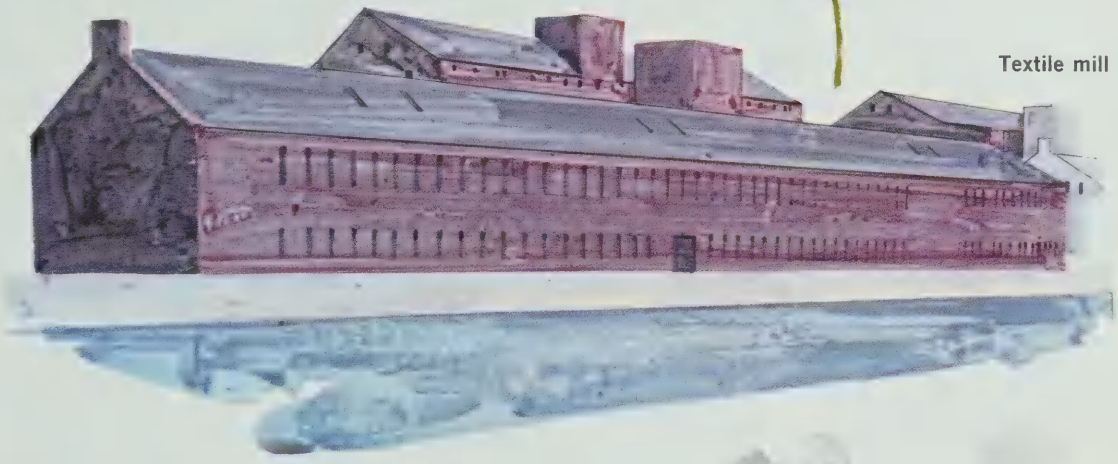
The largest industries in these early cities were ironworks, shipyards, and lumberyards. The power to run machines came from men, animals, and water.

Mills to grind grain, cut lumber, and make cloth were built along fast-moving rivers. Water from the rivers turned the mill wheels. Towns grew up around the mills. Some of these towns became clothmaking, or *textile*, towns.

Many of our early cities grew up along waterways. This is the city of Washington.

Much cotton was used to make cloth. Cotton grown in the South was shipped hundreds of miles to the textile mills of the North. Cotton cloth was then sent to other cities in many parts of the world.

Cotton

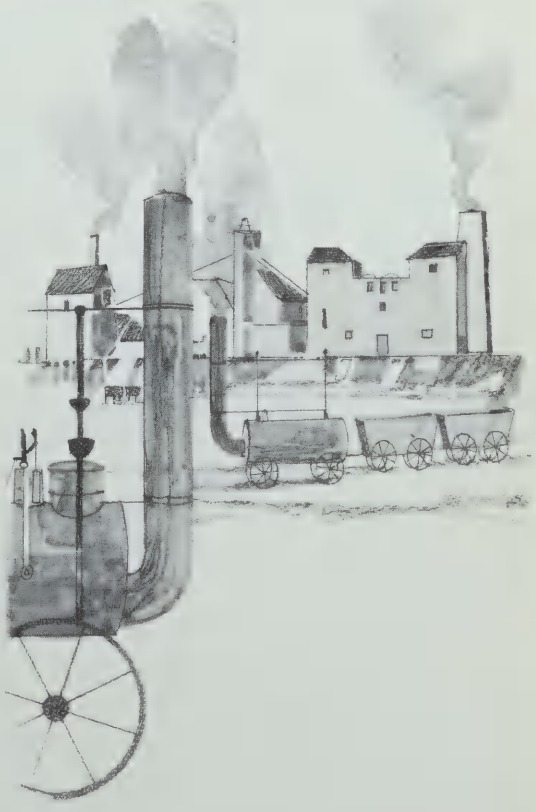


Textile mill

Steam power brought changes

Our early cities needed rivers and seas for transportation. Rivers also supplied power. But men invented a new way of producing power. Men learned how to use steam to run machines. Steam engines could run factories and ships better than the power produced by waters and winds.

To make steam, men needed great amounts of coal for fuel. Coal was heavy and very expensive to move. So factories had to be near coal mines. Water transportation was also needed for trading. So cities grew near coal mines. Cities also grew near rivers. Coal could be brought to these cities by boat.



Railroads helped cities develop inland

In a few years steam locomotives were pulling trains. Then factories no longer needed to be near rivers. Men built factories and cities along railroads. The railroads brought coal and *ore* to these factories and cities. Cities could grow wherever railroad tracks could go.

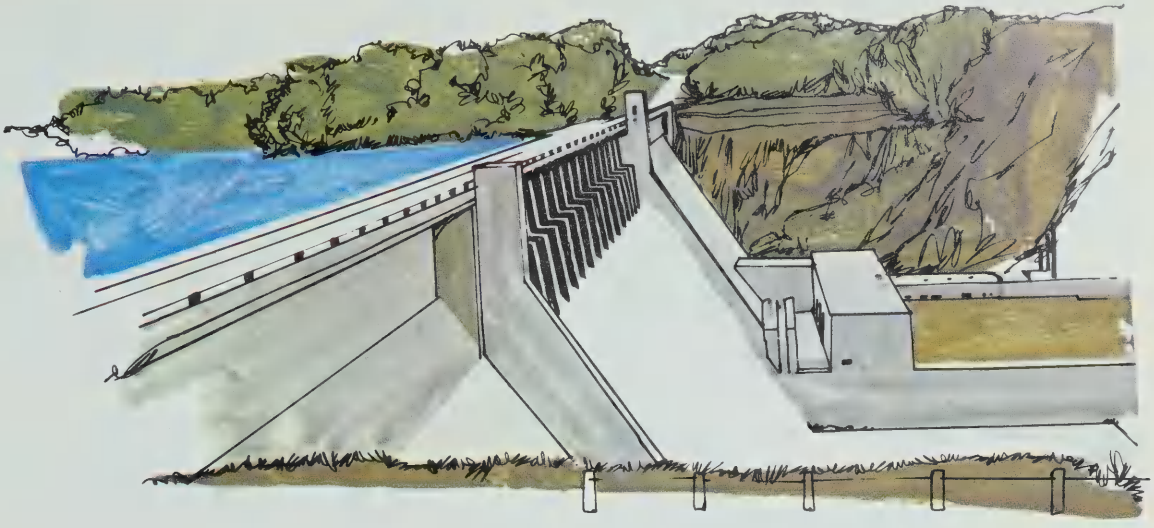
With railroads, people could raise grain and cattle far away from large rivers and oceans. In the West, many cities grew up along the railroads. People in these cities collected and shipped grain and cattle to faraway markets. Later, many of these cities became centers for the packaging of foods such as beef, or breakfast cereals.

New kinds of power gave men more choices in locating cities

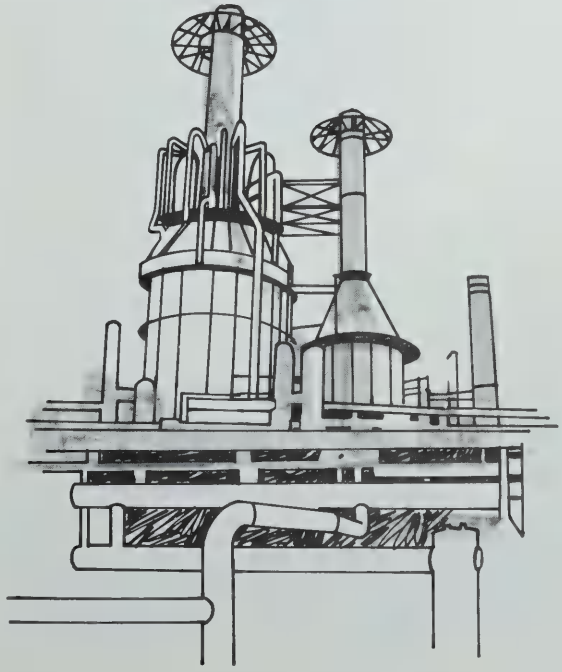
How wonderful it was when electricity was discovered! Electric power gave men greater choices of places to build cities.

Much electricity is developed from waterpower. Today huge dams are built on rivers. From the rushing waters of rivers great machines produce electric power. Electric power is also produced by machines that use coal or oil as fuel. Wires can carry electric power for hundreds of miles to factories and homes.

The invention of gasoline and *diesel*



engines made oil an important source of power. Oil can be moved by trains and trucks. It can flow across the country through huge pipelines. Oil is a cheap fuel for heating and cooling homes and factories.

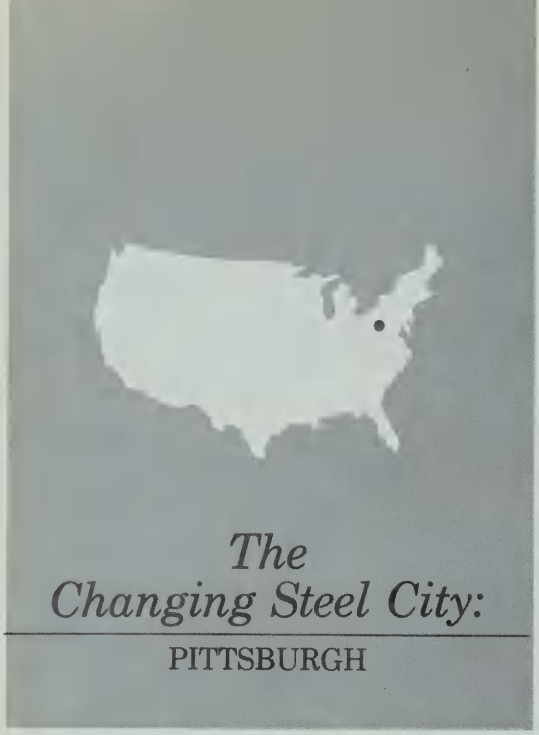


The gasoline engine made the automobile and the airplane possible. Today highways are built so that cars and trucks can move anywhere in the country. People and goods move over the highways quickly. Small towns near highways can grow larger. Airplanes can carry people and goods anywhere a landing field is built.

Locating cities in the future

Today, the development of atomic energy may give our cities an even better source of power.

Men plan for the future. Someday huge domes may be built to cover whole cities. Atomic energy would provide the power to heat and cool a city. The weather of a city could be controlled by man. When science can help us to do this, cities may then be built anywhere men want to live. Who knows—maybe there will be a city on the moon!



The Changing Steel City:

PITTSBURGH

For many years Pittsburgh was known as the Steel City. It stood for coal, iron, and steel. Its buildings were blackened by the mills and factories that worked day and night.

Pittsburgh is more than two hundred years old. But today much of it looks like a new city. Today it is known for many things besides steel. The people of Pittsburgh are proud of their city. And they should be.

Two big rivers and a rich supply of coal and iron ore explain why Pittsburgh is where it is.

As a young man George Washington was sent to the wild country west of the

This is a plan of Pittsburgh in 1826. The ruins of Fort Pitt are shown at the tip of the triangle.

Allegheny Mountains. He looked for a good place to build a fort. What did he think about the land which is now Pittsburgh?

Washington said, "This is well-timbered land, very good for building...the rivers are good for water transportation. Build the fort here."

"Here" was a flat piece of land that looked like a *triangle*. The triangle was formed by hills and the Allegheny and Monongahela rivers. The two rivers joined to form the Ohio River. The fort was built on the triangle.

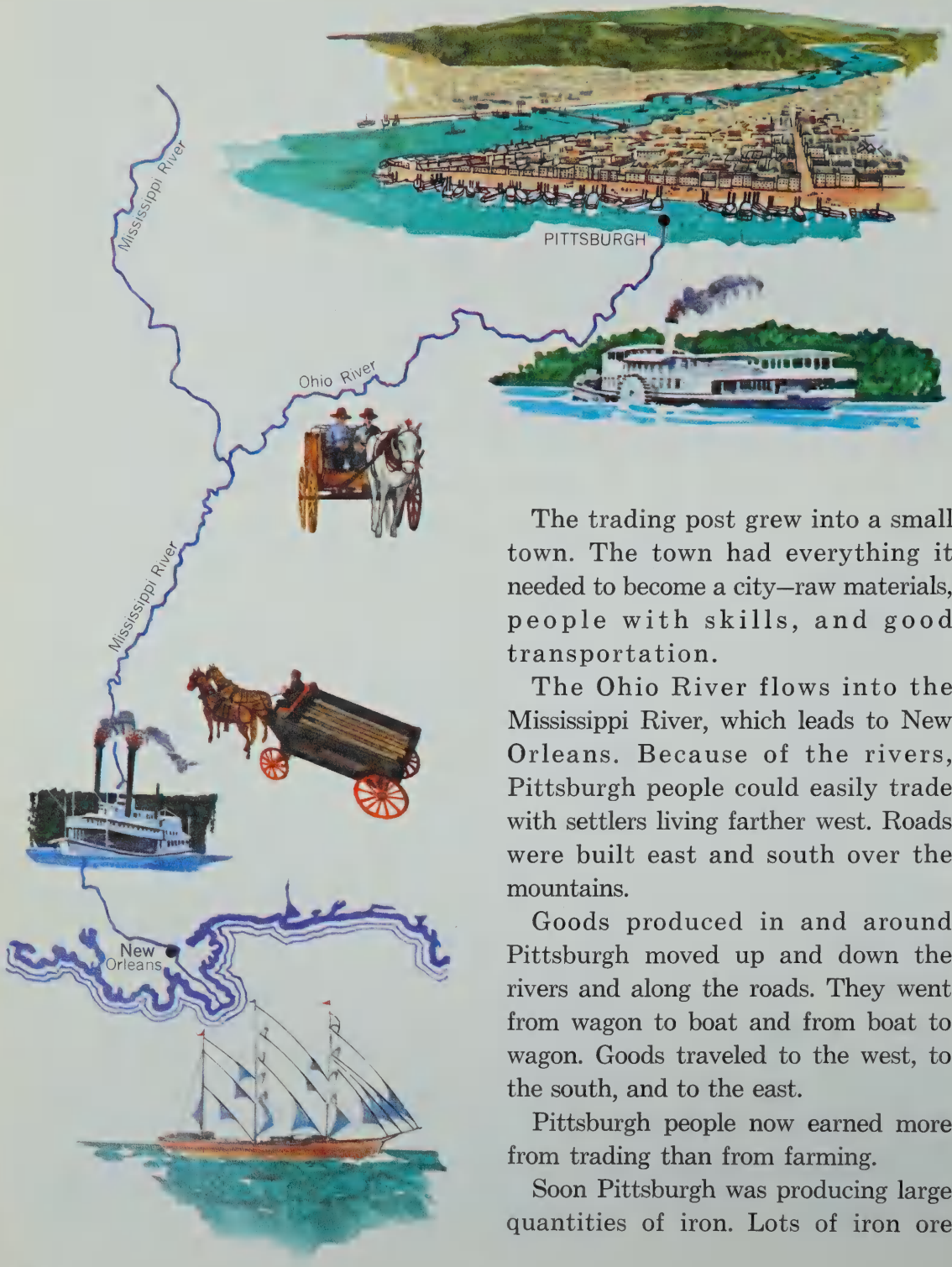
Washington was interested in defense, but this land had more to offer. Traders could travel on the wide rivers.

Fur trappers came to the fort. They came from farther west with furs to trade for other goods. Later, settlers started farms on the land around the fort.

The soil was rich and the settlers grew more food than they could eat. So the labor was divided. Not everyone needed to produce food. Some settlers produced other goods, which they traded for food. The fort became a trading post.

Some of the extra food was traded to settlers traveling west of Pittsburgh. Some food was sent to Eastern cities and traded for manufactured goods.

There was plenty of raw material around the trading post. From the mountainsides came timber for boats, barrels, buildings, and charcoal. There was iron ore nearby. The settlers *smelted* the iron ore with charcoal and other materials to make iron. Most of the smelters were in the mountains near the iron ore and timber. The iron was brought downriver to Pittsburgh, where *foundries* produced tools, nails, and frying pans. Sand and limestone found nearby were used to make glass. Clay from the riverbanks was used to make bricks.



The trading post grew into a small town. The town had everything it needed to become a city—raw materials, people with skills, and good transportation.

The Ohio River flows into the Mississippi River, which leads to New Orleans. Because of the rivers, Pittsburgh people could easily trade with settlers living farther west. Roads were built east and south over the mountains.

Goods produced in and around Pittsburgh moved up and down the rivers and along the roads. They went from wagon to boat and from boat to wagon. Goods traveled to the west, to the south, and to the east.

Pittsburgh people now earned more from trading than from farming.

Soon Pittsburgh was producing large quantities of iron. Lots of iron ore

and fuel were needed to feed the big furnaces. Men discovered how to use *coke* instead of charcoal in the blast furnaces. The coke was made from coal.

Pittsburgh was near the country's richest coal fields. It had many skilled workers and good transportation. It had businessmen willing to risk their savings to build iron mills. All of these helped Pittsburgh grow into a city.

Giant blast furnaces made iron, separating it from iron ore. Pittsburgh was near to good transportation. It was easy to ship the iron to faraway markets. Now iron was produced by the ton instead of the pound.

Businessmen came to Pittsburgh to build factories to make goods from iron. Iron beams, cables, railroad tracks, and nails were produced and sold all over the country.

Many people came to work in Pittsburgh. Factories made more glass, more cloth, more of everything. Pittsburgh became an important city.

In the 1870s, Pittsburgh workers were making tons of iron cable, beams, and rails in iron mills like this.

The city became more important and grew even faster when it started to produce steel. Steel is made from iron. Steel tools and machines are stronger than those made of iron.

A discovery by Sir Henry Bessemer, an Englishman, made it possible to produce steel cheaply and quickly. His process was important to the people of Pittsburgh. Andrew Carnegie brought the Bessemer process to Pittsburgh in 1873.

"The day of iron is past," Carnegie said. "Steel is king."

A special kind of iron ore was best for making steel. There was a large supply of iron ore on the western edge of Lake Superior. The ore was carried by boat over the Great Lakes and by railroad from Lake Erie to Pittsburgh. But the coal supply of the Pittsburgh area made the city great. No other city had so much coal nearby. Coal was needed to make steel. Coal made Pittsburgh the Steel City.

All of America was growing rapidly in the 1870s. Railroads helped the country grow.

To build railroads, steel was needed. Trains then carried steel to many parts of the country. The steel was used for bridges, machines, and buildings. It was used to build many kinds of factories.

The steel mills of Pittsburgh worked day and night. They grew bigger and bigger. New machines helped to produce steel faster. The demand for steel grew greater than ever before.

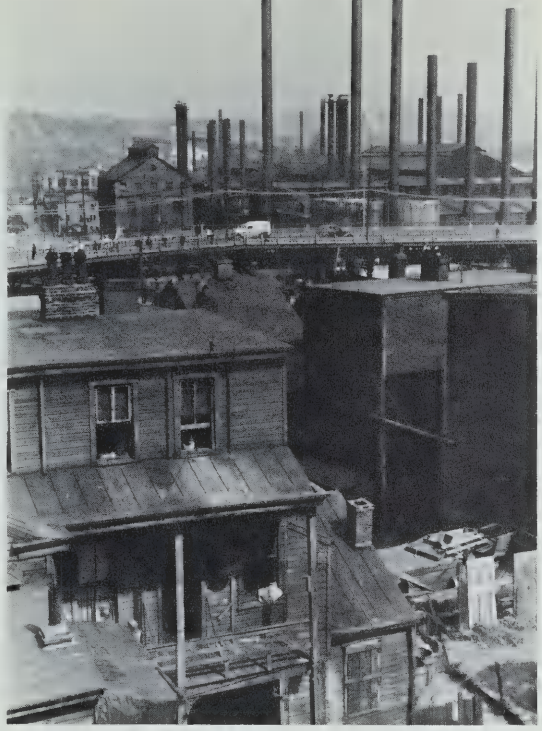
It was a good time for growing America. It was good for most of the people. They earned more.

When people have high incomes, they want to buy more goods. Then the factories produce more. New factories are built to produce these goods. Much steel is needed during these times. A city like Pittsburgh grows rapidly during these times. As the country expanded, so did the steel industry. More workers were needed, but a different kind of worker. The small steel mills had needed skilled workers. Now the big new mills could use many, many unskilled workers too. The steel companies sent men to Europe to hire more workers. In 1890 and the years that followed, thousands of people from Eastern Europe came to Pittsburgh to work in the mills.

The people who worked in the steel

In 1900, giant steel mills covered the land around Pittsburgh.

Open-hearth steel furnaces helped Pittsburgh become the greatest steelmaker in America.



In the 1930s, many mills in Pittsburgh closed.

mills were crowded together in broken-down houses. Streets were blocked with traffic. Bridges were jammed. Smoke, soot, and dirt from factories covered the city. It was ugly, dirty, and unhealthy.

But the people put up with this because the factories, especially the steel mills, gave them an income.

In Pittsburgh eighty cents of every dollar earned came from steel. Seven out of every ten workers had jobs in the steel industry.

Trouble came to Pittsburgh in the 1930s. Factories all over the country were producing goods faster than people could buy them. Some of these factories had to slow down. Some of them closed. Many people lost their jobs. They lost their income. They stopped buying goods and services.

When many steel mills closed, men without work walked the streets looking for jobs.

Much less steel was needed. So steel mills were closed all over America.

These were bad times in America. In Pittsburgh they were worse than in some other cities. The city suffered when the steel mills closed, because most of the people worked in the steel industry.

As if that were not bad enough, the worst flood in the history of Pittsburgh badly damaged the city in 1936.

In 1936, downtown Pittsburgh was flooded for days.

America entered World War II in 1941. The Army, Navy, and Air Force needed guns, planes, and ships. Steel mills again were busy, working day and night to produce steel. The people of Pittsburgh again were working and earning high wages.

When the war ended, many changes were taking place in America.

First, many small cities grew into large cities. Many new buildings were built.

More steel was needed, but now the steel did not have to be made in Pittsburgh. Other cities had built steel mills and were producing steel for themselves and also selling it all over the country.

Cheap electricity and gas offered new sources of power. Iron ore could be brought from other countries across oceans, rivers, and lakes to new steel mills in big cities.

Pittsburgh had other troubles. When the people looked at their city, they saw a nightmare. Every building was filthy. Even snow could not hide the city's ugliness. There were traffic jams because of the narrow streets and bridges.

Young people were leaving for better jobs in other cities. Why would *anyone* want to stay there?

What could the city do? It was up to the people to solve the city's problems.

The people of Pittsburgh worked together and rebuilt the city. People who had become wealthy from steel and other industries helped. The government of Pittsburgh helped. The government of Pennsylvania helped. The government of the United States helped.

Pittsburgh in 1945 at nine o'clock in the morning. Smoke often turned day into night.

The mayor and the people set up a committee to plan the city anew.

The first job was to get rid of the smoke. People who had used coal for fuel now had to use gas or oil, or better coal that made less smoke. Factories had to put filters on their chimneys. This made the air cleaner.

With money from taxes, new highways and bridges were built and streets were widened. There were fewer traffic jams.

Then the old, run-down houses were torn down. Some of the land was used to build homes. Some was used to build new factories.

Next, the people of Pittsburgh went to work on the triangle in the heart of the city, where the first fort had stood. Old railroads, junkyards, and factories were cleared away. Modern office buildings, fine apartment houses, and hotels were built. Work like this is now being done in other parts of the city.

The city built the great Civic Arena. Public parks and parking lots were added. Everything was improved.

Pittsburgh invited companies to move there. An insurance company built a skyscraper. Electronics companies and plastics manufacturers opened new factories.

Companies that had always been in Pittsburgh were busy again too. Shipyards, steel mills, and aluminum companies opened new offices and factories. Scientists who worked for the companies searched for ways to make better glass, steel and food products. Sales offices of big companies moved there because it was close to markets. Schools and colleges in Pittsburgh train scientists, engineers, and many other specialists for the city's businesses and industries.

Pittsburgh was built where it is because of its natural resources. First the rivers and forests were the most important resources. Then the rivers, coal, and iron ore helped make Pittsburgh the Steel City. Today Pittsburgh is still important because of its people. They rebuilt the city.

Now new factories, laboratories, and offices come here because the city has skilled workers. People want to start businesses in Pittsburgh because it is a pleasant place to live and work.

Pittsburgh's new Gateway Center on a wintry morning. Hotels, apartments, government offices, and many businesses are located in the Center.

A City Blooms in the Desert

At last the wagons reached the top of the last mountain ridge. As the tired horses rested, the men looked down at the desert valley they had come a thousand miles to find.

These men had been told by their leader to travel ahead of the main wagon train. Some of the people in the wagon train were sick. Others were old and tired. They would rest while these men went ahead to choose the place to build their city and farms.

It was already the middle of July. There was little time to grow food. If the people were to eat next winter, potatoes must be planted now.

It took four days for the scouts to reach the floor of the valley. Once in the valley, they rode to the north over the desert.

They arrived at a river where two streams ran together. Between the streams lay rich soil. The wagons stopped. Here they would build their city.

The first thing to do was plow. But look! The plows could not even scratch the sunbaked earth. What was to be

done? The men built a dam across the river. Soon the water flowed out of the river and over the land. It softened the soil enough so that the men could plow it and plant their potatoes.

A few days later the rest of the wagon train arrived. Some of the people were happy at the sight of the streams, the newly planted field, and the valley sheltered by a ring of snowcapped mountains. But others were downhearted. It was hot. There were few trees. The soil for miles around looked too dry to farm.

The people had to decide whether to stay there or move on. The leader of the wagon train thought. He remembered the things that had happened to his people over the last sixteen years.

They were good people. They were honest. They worked hard. They had many skills. But no matter where they had gone, they had not been liked by their neighbors. They had not been liked because they were *Mormons.*

It was hard for other people to understand the religion of the Mormons. When people do not understand, they often become unkind. In many places, people would not sell goods to Mormons, or trade with them. In other places, Mormon houses and barns had been burned to the ground. And so the Mormons had kept moving westward, looking, always looking, for a place where they could live in peace. As their leader said, "If there is a place on this earth that nobody else wants, that's the place I am looking for."

Finally they had come to this valley. It was hot and dry. But it was theirs. They could give up and move on. Or they could be brave and stay.

Their leader knew they had the strength to stay. The people had the skills to stay. Before the great journey, some of them had learned to be carpenters, doctors, weavers. Some of them had learned to be stone and brick masons, farmers, blacksmiths. The people were skilled in almost every trade. They were ready to take hardship.

Finally Brigham Young, the leader of the Mormons, spoke. He repeated what he had said when he first saw the valley. "This is the place," he said. "Here will we live, and here will we *prosper.*"

They worked. They had never worked so hard. They irrigated and plowed and planted. They laid out streets. They built mills and workshops and homes.

At first they did not have much money, so they traded goods and services without money. The blacksmith traded nails for flour. The miller traded flour for a pair of boots. But this was not always easy. Sometimes when the blacksmith needed boots, the shoemaker did not need nails or horseshoes.

Again they solved their problem, this time by making their own money to use for trading with each other. Money made it much easier to trade goods and services, so there was more trading. More trading caused people to produce

more goods and services. The new city began to grow.

As the city prospered, more people came westward over the mountains to live in the Mormons' valley. These people did not come to find work and wealth. They came to be with people who believed as they did. They wanted to help build a great new city. They did not worry about getting jobs.

The settlers still had problems. First they planted their crops too early, and the crops froze. Then they planted them too late, and the crops died because there was not enough water. But with hard work and good sense, they found out how to grow strong and healthy crops in the soil of the valley.

Wood was scarce. The settlers did not have enough fuel. But after several years of searching, they found coal. Then the Mormons had a better fuel than wood. And they also had a new industry for their workers—mining.

When they needed iron, their leader told them to look for iron ore. They found ore, and learned to make iron. This meant more new jobs in a new industry. It also meant that their blacksmiths would no longer have to bring in iron from the East.

The Mormons learned to grow sugar beets and make sugar. They built a woolen mill to weave wool cloth.

But in summer the valley was too hot for woolen clothes. The Mormons tried to grow cotton in their valley, but the crop did not do well. They discovered that fine cotton could be grown in a valley 300 miles to the south. Several families volunteered to move there. They planted cotton and started a new Mormon settlement. Soon cotton was sent north to the valley of the Mormons.

No task was too hard for these brave people. No challenge was too great.

Just as some families moved to grow cotton, others moved to nearby valleys

to start new towns and cities. These new settlers were prepared to grow or make everything they needed, just as the first settlers were.

All the people in the valleys lived by the rules of the first community. One of the rules in this dry land was that water belonged to all the people. Another was that no man could have more land than he could take care of.

They obeyed the rules they had made. They were brave and hardworking. Other settlers joined the Mormons. They mined copper, gold, silver, iron, and lead. The people got salt from the great lake nearby. They built a great city.

Today that city is like many other great cities of the United States. It has wide, tree-lined streets. It has schools and churches, factories and stores. Its people walk and rest in its parks, and play on its golf courses and in its swimming pools.

Like the early pioneers, the people of the city still work hard. But their hard work, like that of the city's founders, has made their lives better.

They have won a way of life from the dry earth, the clear streams, the tall mountains, and the Great Salt Lake.

They are the hardworking people of Salt Lake City.

The City: Marketplace of Goods and Services

LESSON 3

Every morning the city comes alive. Shoppers crowd into stores looking for basketballs and paint remover, flowerpots and ruby earrings, overcoats and cinnamon, lollipops and lipsticks.

People take their shoes to repair shops for new heels. They take their children to doctors for checkups. They take their heads to barbers for haircuts.

Everywhere people are spending money. Where do they get the money to pay for all these goods and services? They earn income.

How do people earn income?

Many of the people earn income by working in the stores where we buy goods. Some of them work in offices and showrooms where large amounts of goods are sold to stores. Some of them work in warehouses where goods and food products are stored. Many of the people earn income by helping to move goods between sellers and buyers. Some of them work as traveling salesmen selling different things, from toothbrushes to heavy tractors. Many of them produce goods in factories.

Many people work in the offices where we can go for services. There are offices for doctors, dentists, lawyers, and many others who produce services. We can also go to employment offices where specialists help people find jobs.

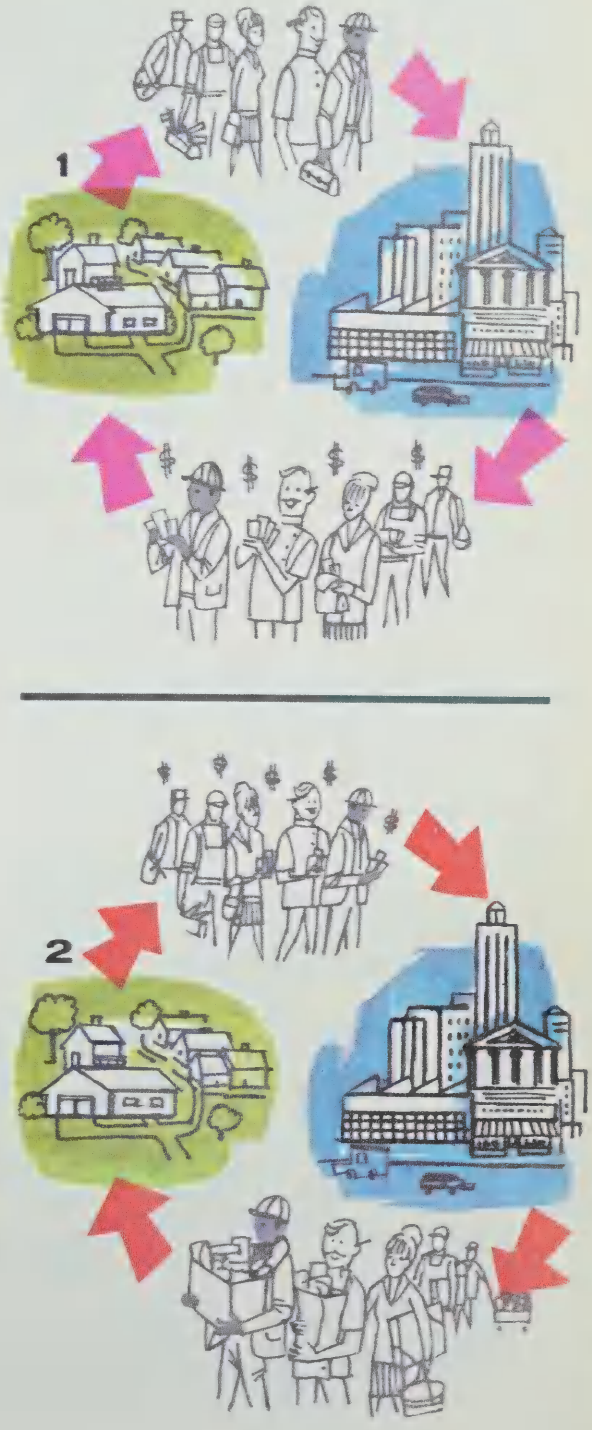
Some people earn income by working in banks where savings are collected, and then loaned to people who want to borrow them. And many people earn incomes by owning businesses and taking risks.

People buy and sell in markets

All these people use their income to buy goods and services produced by the many different businesses. The businesses use their income to pay all the people who help produce the goods and services. This makes money go around and around.

All the places where sellers meet buyers to sell goods or services make up the market of the city.

Money Goes Around and Around



Why do businesses produce goods and services?

In the market, businesses *compete* with each other for buyers. They all try to produce the best goods or services at the lowest cost. The buyers try to buy where they can get the best goods or services for their money.

If a businessman's income is higher than the cost of producing his goods or services, he has earned a profit.

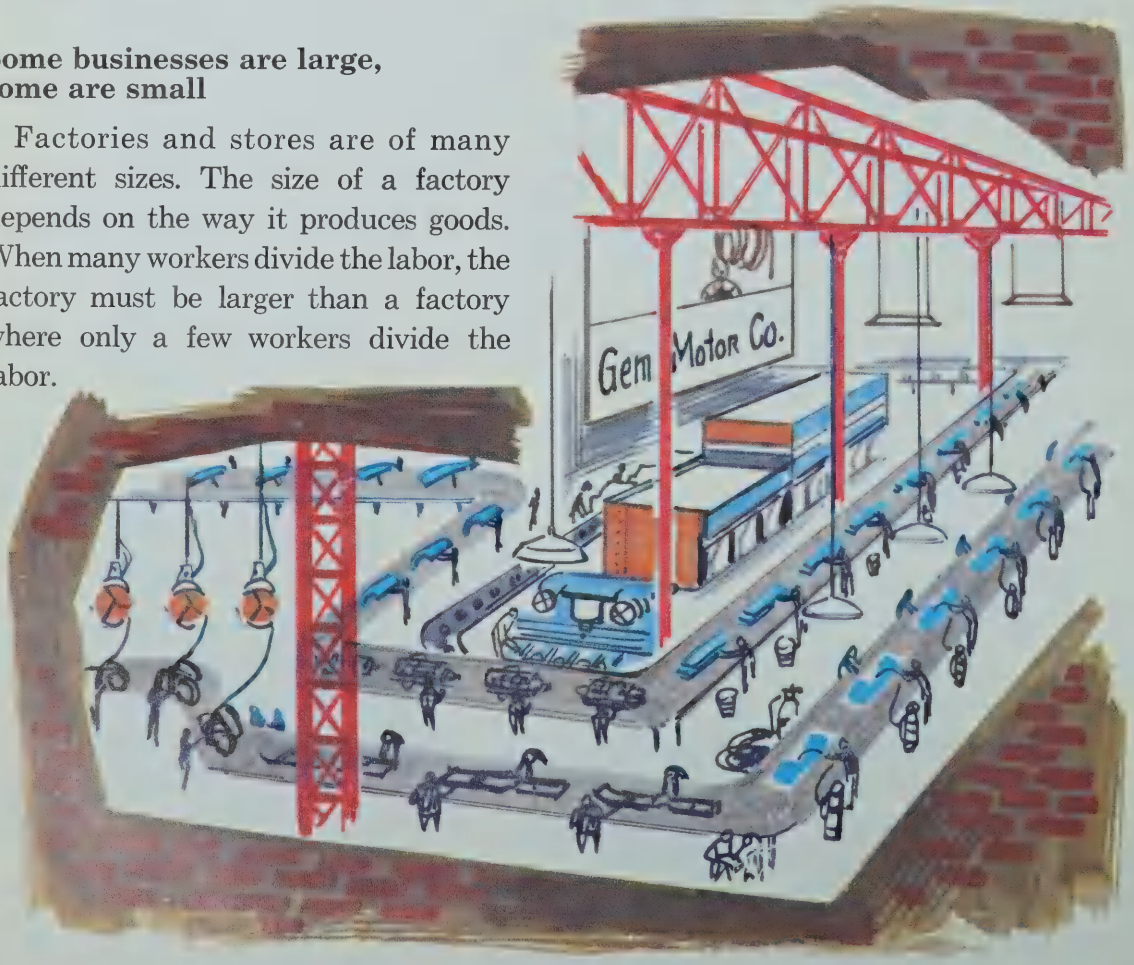
If he earns a profit, he may make his business bigger. But if he suffers a loss, he may have to close his business.

Some businesses are large, some are small

Factories and stores are of many different sizes. The size of a factory depends on the way it produces goods. When many workers divide the labor, the factory must be larger than a factory where only a few workers divide the labor.

The size of a factory also depends on the kinds of machines that are used. When large machines divide the labor, the factory must be larger than a factory where small machines are used.

A clothing factory uses small machines to cut, sew, and press. The factory building can be small. But an automobile factory uses huge machines. They stamp out the steel, make the engine, paint the body of the car, and carry the unfinished car from one place to the next. The factory building must be very large to hold these machines.



When factories use big, expensive machines, they must produce great quantities of goods to make full use of the machines. The market for these goods is not one city, but many cities. Such factories must have big offices and warehouses. Big factories must have lots of equipment to move in raw materials and move out the finished products. All these things make the business bigger.

The size of a store depends on how much savings the owner has, or how much he can borrow, to put into the business. The size of the store also depends on the number of customers the owner thinks will come. A grocery store in a shopping center is usually larger than a grocery store in a small neighborhood. This is because many people from many neighborhoods go to a shopping center. They can do all of their shopping in the shopping center's many stores.

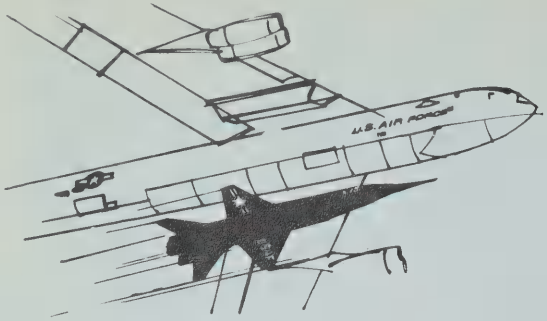
Who owns businesses?

Most of the businesses in our cities are small. A small business is usually owned by one or two persons. The owners do not need much savings to run these businesses. Very large businesses are usually owned by many people. Many of these businesses are called *corporations.* Factories, hotels, or office buildings may be owned by a corporation. Lots of savings are needed to run large businesses.

In a corporation, many people in many cities may share the risk. If business is bad, the owners may share the loss of their savings. If business is good, the owners share the profits.

How do people choose their jobs?

In all these businesses there are thousands of different jobs. How do people choose the jobs they want? They must think about many questions. How much training does the job call for? How long are the hours? Is the work steady? Is it hard? Is it interesting? Will the job lead to better jobs? What is the income?



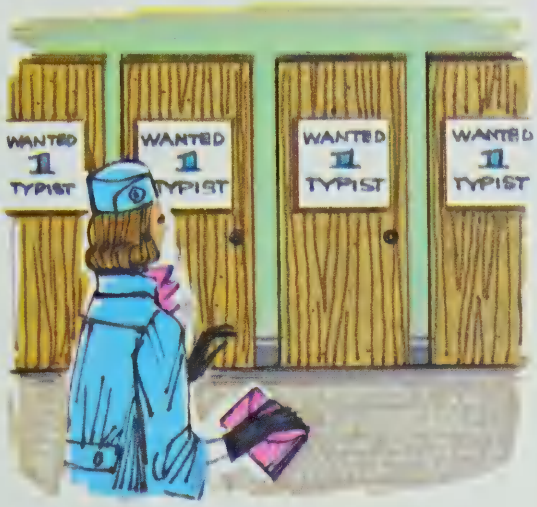
Why do some people earn more than others?

Income differs for many reasons. People who do dangerous jobs often earn more than people whose jobs are not so dangerous. A pilot earns more if he tests new airplanes than if he flies passenger planes. If the test pilot could not earn more, then he might choose to fly a passenger plane, which is safer.

People who work only part of the year usually earn more when they work than people who work all year. A construction worker who cannot work in bad weather has to earn enough in good weather to live all year. If he could not earn enough, he would not be willing to do construction work.

People who risk their savings usually earn more than people who work for a salary. The owner of a store usually earns more than the manager of a store. The store owner's extra income is profit. The store owner gets a reward for risking his savings.

Income also differs because some people have more education than others. It costs more money and time to become a doctor than a taxi driver. So a doctor earns more than a taxi driver. A doctor's education is expensive. He has no income during his schooling. He must be repaid for the time when he was not earning.



Income also depends on *competition.* If dozens of people want one job, they compete with each other. The one who is willing to work for the lowest pay will get the job. But if only one person wants the job, he does not compete with anyone. The employer has little choice and will probably pay the person the salary he asks for.

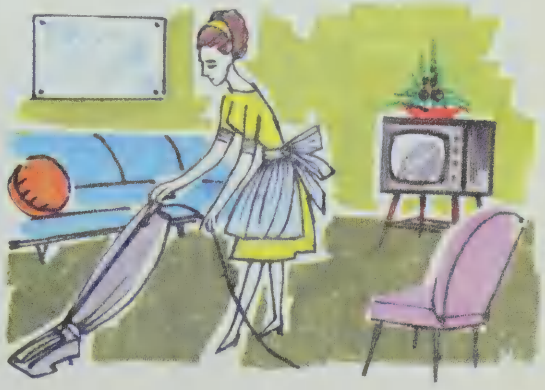
If many employers want to hire one person, the employer who offers the highest pay will be able to hire that person. But if only one employer offers the person a job, that person must take whatever salary is offered. This is because there is no competition.

People can buy more today than they could long ago

Businessmen are always looking for new ways to produce more and better goods and services.

These new ways help lower the cost of producing these goods and services. Then the prices of these goods and services will go down. Today people are able to buy more goods and services with their income than people could long ago.

As factories, stores, and offices improve, the city becomes a greater marketplace of goods and services.



The Little Giant:
ELKHART

In Houston a computer tracks an astronaut. In New York a girl looks out the window of a tall office building. In Seattle a mother takes a headache pill. Outside Detroit cars cross over a steel bridge. In Florida a man and his wife buy a *mobile home.* In Boston a man plays a flute. And in Helsinki, Finland, a big machine cleans rugs.

What is the same about each of these scenes? Is it hard to guess? Something important in each of these scenes was produced in the city of Elkhart, Indiana.

Elkhart has many kinds of homes. There are houses on quiet, tree-lined streets. There are houses near the water. Brand-new houses are built as Elkhart grows.

Computer parts, window frames, headache pills, steel bridges, mobile homes, flutes, rug-cleaning machines, and many, many other things used across the country and around the world are produced in Elkhart's 360 factories and workshops.

One might think that with so many factories Elkhart would be a very big city. But it is not. It would take a hundred Elkharts to make just one Los Angeles. Elkhart has no skyscrapers or big museums as do New York and Chicago. But it is a clean and pretty city, neither very large nor very small. It has many parks. Two tree-lined rivers wind through the town.

Most of the 60,000 people who live in and around Elkhart like it there. Ask a mother why she likes Elkhart, and she may talk about the fine schools her children go to. An engineer may say that he likes to be able to walk to work. Others are proud of their homes. Many enjoy swimming, boating, or fishing on Elkhart's rivers or nearby lakes. Many will say that they like living in a pleasant city that others like and care about.



Elkhart's factories offer people many different kinds of jobs.

But Elkhart is more than just a pleasant place to live. It is a good place to work. Because its many factories make so many different kinds of things, Elkhart offers a choice of many jobs.

To see just how the many factories make Elkhart a good place to work, one has to look at them more closely. Saying that there are 360 factories does not tell much about them. It is like saying there are 360 animals. They could be elephants or puppy dogs, big lions or little kittens.

Some of Elkhart's factories are large, with as many as 2500 workers. Others are small, with only one or two workers. Some of the big factories make small things like headache pills. Some of the small factories make big things like mobile homes. Most of the factories are owned by individuals or families in Elkhart. Others are owned by many people who live in different parts of the United States.

The many factories and different kinds of jobs are good for the city of Elkhart. If people stop buying one product and one business fails, there are many other businesses that will keep right on growing. Then people who lost their jobs may find other jobs with these growing businesses. It is not like a city that depends on one industry. There, if that one industry fails, nearly everybody will be out of a job. People will have few choices in that city to find other jobs.

How has Elkhart come to produce so many different kinds of goods? Elkhart has only a few of the raw materials that Elkhart's factories need. Most of the factories do not need large amounts of raw materials. What raw materials the factories need are brought in over railroads and highways. These raw materials are important to Elkhart. But it is what the people of Elkhart do with the raw materials that is more important. With their ideas and skills the people change the raw materials into valuable finished goods.

In Elkhart many people are willing to take chances on new ideas and start their own small workshops. Elkhart's bankers know these people and their skills, and are willing to lend savings to businessmen with new ideas. Some new small businesses have failed, but some

Thousands of pills and other medicines are made by Miles Laboratories. They are produced for people all over the world.

have been successful. Some of them have grown big.

One of the biggest businesses in Elkhart today is Miles Laboratories. About a hundred years ago Dr. Franklin Miles opened an office in Elkhart. In those days doctors often made their own medicines. Dr. Miles's patients found the medicines that he made were good. He decided to go into business with a local druggist and a store owner to produce medicines.

The small company did very well. Today Miles Laboratories is a big company with 7000 owners who live in many different parts of the United States. Its main office and largest factories are still in Elkhart, where Miles employs more than 2500 workers. The many different kinds of drugs and medicines made by Miles in Elkhart are

An oboe is carefully tested by Mr. Platz, who makes about twenty-five handmade oboes every year.

now sold all over the world.

Not every business has to have a big factory like Miles in order to be a success. Elkhart produces more than three out of four band instruments made in the United States. Many of these are produced in big factories like that of C. G. Conn Ltd. Others are made in small workshops.

Ford D. Platz is the owner of the Platz Oboe Manufacturing Company. He is also its only worker. He makes each oboe himself. He even makes many of his own tools. Mr. Platz has no salesmen. Musicians tell other musicians how good his oboes are. Musicians think so much of his product that they sometimes come from as far as 2000 miles away to pick up their new oboes in his shop. They want to meet the man who makes such fine oboes.

Most of Elkhart's factories are smaller than Miles but larger than Mr. Platz's little workshop.

There are about fifty workers in the factory of Moore's Time Saving

Rug-cleaning machines go from Mr. Moore's factory to many cities around the world.

Equipment. It makes huge machines for cleaning rugs. Mr. Moore used to have a rug-cleaning business. He did much of his work by hand. Often, as he cleaned the rugs, he thought about how long it took. He decided there must be a faster way to clean rugs.

Mr. Moore was not an engineer who knew a lot about machines, but he did know the kind of machine he wanted. Working with specialists, he built a rug-cleaning machine that really saved time.

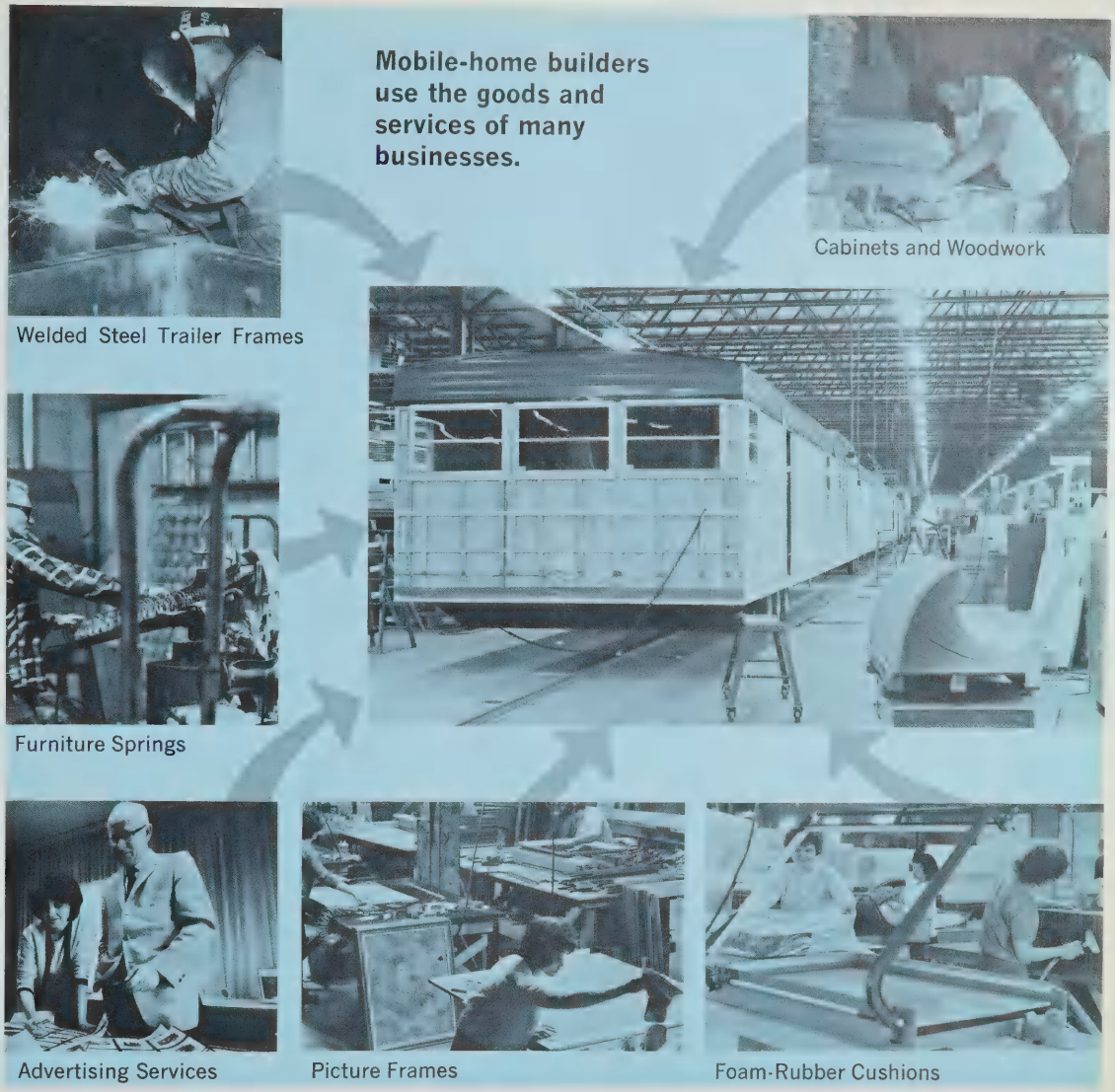
A big rug-cleaning company in Chicago heard about Mr. Moore's machine. They asked him to build one for them. It took Mr. Moore nine months to build it. More orders for machines came in. He learned how to build the machines faster. Today he can build a rug-cleaning machine in four weeks. He sells his machines to rug cleaners all over the world.

Some of Elkhart's small workshops supply important products to huge factories in other cities. There are about fifty workshops that produce tools and *dies*. Dies are used to stamp out metal parts. They work almost the way a cooky cutter makes a certain shape of cooky. Each part that is stamped with a die is like every other part stamped with that die. Most goods are made of many different parts. If the dies are not carefully made, the parts may not fit together. A diemaker has to have great skill in order to design and produce dies. Without dies, factories could not produce so many of the same kinds of goods so fast.

Dale Cullip has a diemaking shop in Elkhart. He started as a diemaker working for another company. After a while he decided to go into business for himself. He was able to get a loan from a local banker who knew what a good diemaker he was.

Mr. Cullip's company has made many different kinds of dies. Some of them he has sold for as little as $200. But a factory once paid him $24,000 for a die that took lots of thought and work to make.

Mr. Cullip designs and produces dies in his small workshop. He supplies dies to many factories.



Elkhart produces more mobile homes than any other city in the country. There are more than sixty mobile-home factories in Elkhart—some big, some small. A man who wants to go into this business does not need expensive tools or many helpers. He does not need much savings. Many mobile-home factories are just small workshops.

There are about a hundred different factories in Elkhart that produce parts for mobile homes. They sell these parts to mobile-home producers, who use these parts to make mobile homes. The factories produce large quantities of these parts. They produce the parts faster, better, and at a lower cost than the mobile-home factories could.

At Conn a specialist works on a musical instrument.

Businesses spend much time and money to find new ways of producing and selling goods. Elkhart businesses do the same. For a long time C. G. Conn Ltd. produced big bass horns made of metal. These horns were too heavy for children to carry while marching. Conn scientists found a way to make lighter bass horns out of fiberglass instead of metal. Now children can play bass horns in marching bands, and Conn can sell more horns.

The scientists at Miles Laboratories study what causes pain and how to produce better medicines to fight pain. When they develop a new product, they spend millions of dollars to advertise it so that people will know about it and buy it. As a result almost everyone knows about some of Miles's products, such as Alka-Seltzer.®

One of Elkhart's companies lives on new ideas. It is the CTS Corporation. At first it produced telephones. When radios were invented, CTS produced parts for radios. Today CTS produces tiny *electronic* parts used in record players, computers, and TV sets. Many of these parts are smaller than a fingernail, but without them the

At the CTS Corporation new ideas lead to new and better products. The parts made at CTS are used in computers, TV sets, and rockets.

computers and many other instruments and machines could not operate. CTS sells the parts to the companies that make computers, TV sets, radar equipment, and other electronic products. Whenever companies decide to produce new products that use CTS parts, CTS engineers help them. The companies and the CTS engineers plan together how to produce parts that will fit the new product.

The factories of Elkhart have a big market for their goods in both near and faraway places. Elkhart lies in a nest of bigger cities. Milwaukee, Chicago, Indianapolis, Toledo, and Detroit are all nearby. As these and other cities grow, the factories of Elkhart have larger markets for their goods. As more people live in these cities, more schools are needed and the schools buy band instruments. More people need medical care, and more medicine is needed. As more people go on vacations, they will buy more travel trailers. As more young people marry and older people retire, more mobile homes are sold. The more people earn, the more TV sets they will buy. As more offices use computers, more tiny computer parts are sold. All these things are good for the businesses of Elkhart.

For many goods produced in Elkhart the market is not just the cities nearby, or even the United States, but the whole world. The larger the market for Elkhart's goods, the greater will be the income of the businessmen and the other people of Elkhart. Specialists who study jobs and income say that very few of Elkhart's people are out of work. The workers of the city earn higher wages than workers do in many other cities of the same size.

The income that the people of Elkhart earn helps the city in many ways.

It helps the stores and offices of Elkhart, where the people spend part of their income. It helps the banks, where many people put a part of their income in savings. Part of that income helps the city government in the form of taxes. The taxes are used to build schools, parks, streets, and sidewalks, and to keep the city safe and healthy.

Finally through voluntary giving, the income earned by the people helps to support the needy, a symphony orchestra, a theater, and many other things. These gifts have helped make Elkhart a little giant.

The World Is Elkhart's Market

Christmas at Conrad's

It was almost the Fourth of July. The chief carpenter looked at the designer's drawings for Christmas decorations and displays at Conrad's department store.

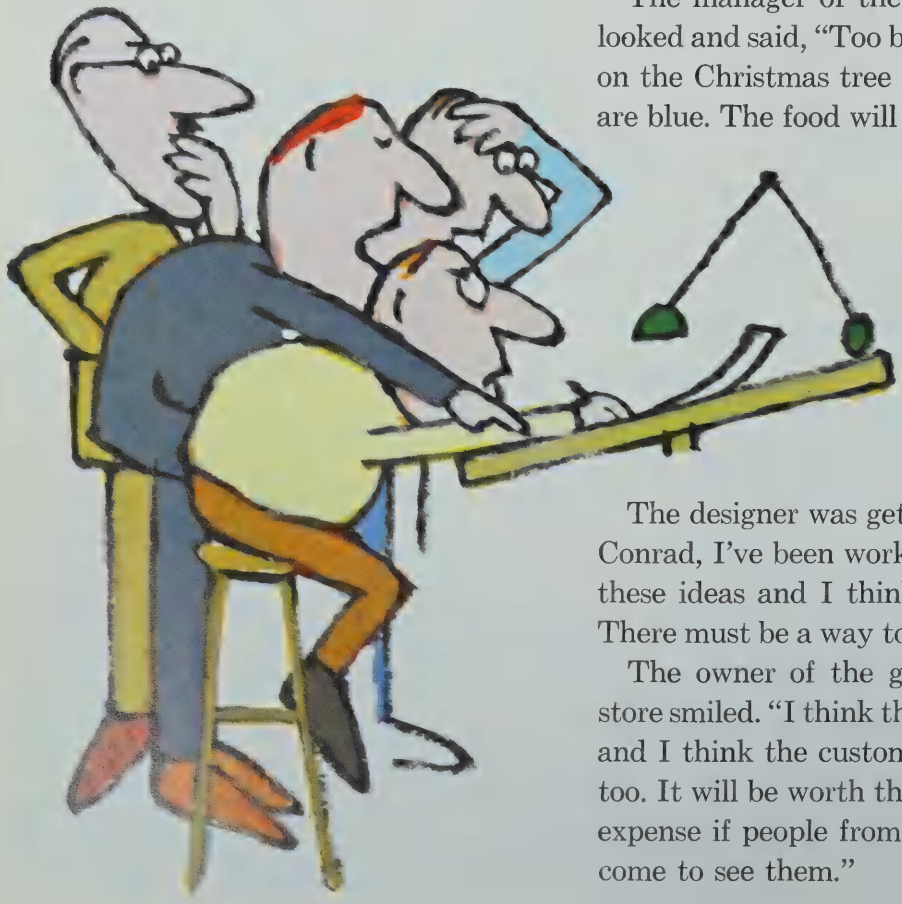
"Too much. My men would need ten months to make them and they only have five."

The warehouse manager looked and said, "Too many. We don't have enough storage space."

The head of shipping looked and said, "Too big. They won't go in the elevators."

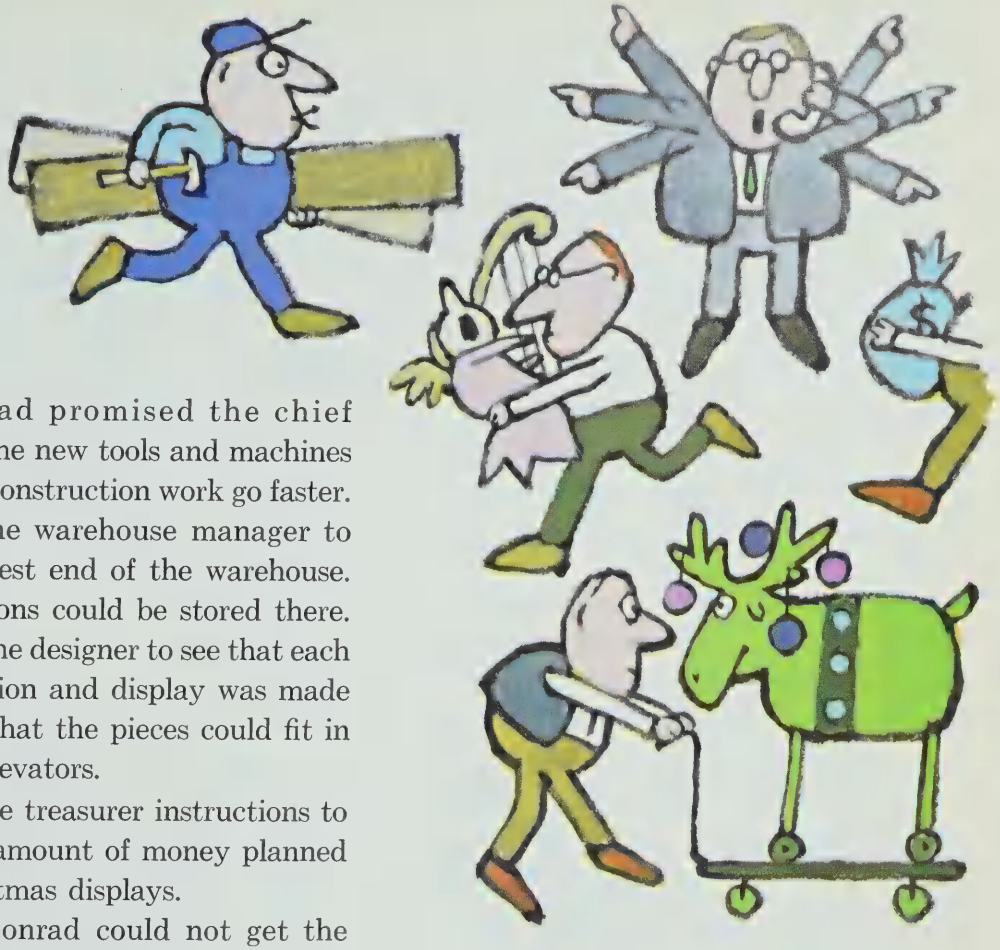
The treasurer looked and said, "Too fancy. We can't afford them."

The manager of the store restaurant looked and said, "Too blue. All the lights on the Christmas tree in the restaurant are blue. The food will look awful."



The designer was getting angry. "Mr. Conrad, I've been working for weeks on these ideas and I think they are good. There must be a way to get them done."

The owner of the great department store smiled. "I think they are wonderful and I think the customers will think so too. It will be worth the extra work and expense if people from all over the city come to see them."



Mr. Conrad promised the chief carpenter some new tools and machines to make the construction work go faster.

He told the warehouse manager to empty the west end of the warehouse. The decorations could be stored there.

He asked the designer to see that each large decoration and display was made in pieces so that the pieces could fit in the freight elevators.

He gave the treasurer instructions to increase the amount of money planned for the Christmas displays.

But Mr. Conrad could not get the designer to change the blue tree in the restaurant.

"It will be beautiful," said the designer.

"It will make everyone sick," said the restaurant manager. "The lights will shine on the food. Blue salads, blue tea, blue chicken sandwiches—"

"Just a minute, gentlemen," Mr. Conrad interrupted. "If we put white lights *on* the tree, the food won't be blue. And if we shine blue floodlights *at* the tree, then the tree *will* be blue."

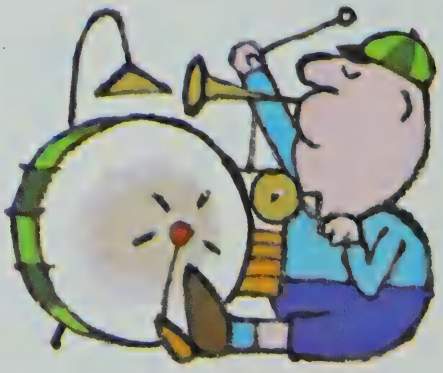
The restaurant manager was happy. The designer was happy. Mr. Conrad was happy.

Everyone began to work very hard. There was no time to lose if Conrad's was to be ready by Christmas. The advertising department was already drawing the pictures that would appear in the city's newspapers. Photographs and drawings were being made for the catalogs of gifts that would be mailed to Conrad's customers. For months store buyers had been traveling all over the world to find special goods for Christmas gifts. They ordered necklaces and neckties, can openers and canaries, teapots and—best of all—toys.

The toy buyer's job was probably the hardest of all. Every year, three weeks after Christmas, he was in England ordering toys for the next Christmas. He went to Nuremberg, Paris, Milan, Valencia, Lisbon, New York, Hong Kong, and Tokyo—all before Easter. In each city he went to great toy fairs. Toymakers from all over the world brought their new toys to the fairs to sell them. The toy buyer had to guess which ones children would want next Christmas. And he had to decide how many of each toy to order.

He ordered dolls that danced and sang, and toy racing cars that looked and sounded just like real ones. He ordered inexpensive plastic building sets that had been made by machines. He ordered expensive little dolls that had been hand-painted, one by one. He ordered masks just like the ones the hero of a new TV show wore. He ordered space suits that looked just like the ones the real astronauts wore. He ordered stuffed bears and bright rattles for babies.

Every time the toy buyer saw a toy he liked, he asked himself if children would like it. Then he had to ask himself if parents would buy it. One year he had ordered 50 one-man-band sets. Children thought they were wonderful. But parents heard them and got headaches from the noise. The day after Christmas there were 47 one-man bands left in the warehouse. Two days after Christmas three one-man bands were brought back to the store by parents with headaches. After that, the toy buyer was very careful to think about what parents would like.



By the time school opened in the fall, the store's Christmas catalogs were ready. One catalog was full of sweaters, cuff links, baskets of fruit, and electric shoe shiners. The other was just for toys. Thousands of these bright little booklets were mailed to homes all over the city and the countryside.

By Halloween hundreds of trucks were rolling up to Conrad's warehouses bringing in the Christmas goods. The carpenters and painters were finishing the displays and decorations.

Mr. Conrad called the store's employment office. The employment director was busy hiring hundreds of extra salesclerks and deliverymen.

"Be sure to pick calm, strong people to work in the toy department this year," Mr. Conrad warned. "Some of those ladies we hired last year were nice, but they just couldn't take it."

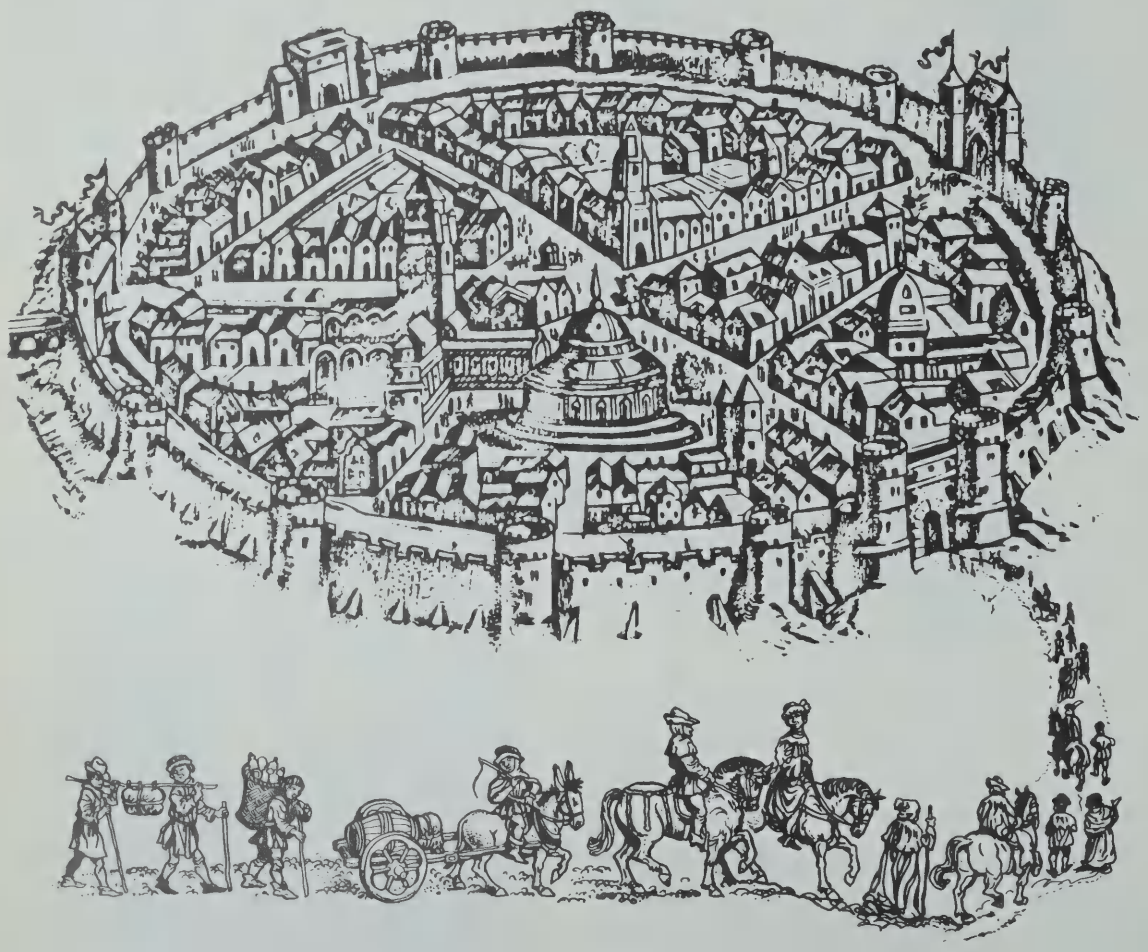
Thanksgiving night the store was full of workmen. Mr. Conrad watched as his store turned into an old-fashioned dream of Christmas. By morning the decorations were all in place. On every shelf and counter gifts were waiting for buyers. Clerks were in place with their sales books open and their pencils sharpened. A group of Christmas carolers began to sing "Jingle Bells." In the toy department Santa Claus pulled up his boots and fluffed his beard. A big blue tree shone in the restaurant. Everything at Conrad's was ready for Christmas.

When the store doors opened, Christmas shoppers poured in. Mr. Conrad watched as children laughed and pointed at the beautiful displays. People hurried toward the elevators and escalators. Salesclerks busily wrote up their sales.

Mr. Conrad sighed as he thought, Just think! In only two months we can begin working on next Christmas.

The City: Marketplace of Ideas

LESSON 4



Long before people used the ABC's in writing, the people of Egypt wrote their ideas in pictures. The picture for "city" was a cross inside a circle. The cross stood for the crossroads where people, goods, and ideas met. The circle stood for the wall that kept warlike people out of the city. Inside the wall, people could work and trade. There was peace and order in the city. The circle also stood for a group of people living closely together, sharing work and ideas.

People learned to share ideas in early Athens. The boys shown in the drawing are being taught music and writing.

Civilization began in cities

In early times people came from farms and villages to live in places such as Babylon. They brought with them the customs of their families and tribes. These people with different ideas met in the city. They had to learn how to work with each other. They had to learn how people with different ideas could live side by side. They had to invent new ideas so that they could have peace and order in the city. When people with different customs and ideas in the city learned how to work and share ideas with each other, *civilization* began.

We have cities today because people learned how to work and share ideas together.

Cities attract people with ideas

Today the city draws people with ideas just as a magnet draws pieces of iron. People with ideas come from many parts of the world. They hope to find people with whom they can share their ideas. Many of these people had no one to share their ideas with in their parts of the world. Many of these people were not allowed to talk about their ideas.

Why do people with ideas come to cities?

A city needs people with ideas because of all the work that has to be done. There are many kinds of work. So there are many kinds of specialists.

The city needs people with ideas who can help keep the city healthy, peaceful, and safe. There have been times when terrible sickness has killed thousands of people in a city. There have been times when fire has destroyed a city.

There are cities today where people live crowded together. There are many

cities with neighborhoods that do not live at peace with each other. There are cities where the air is dirty. There are some cities without enough clean water to drink. There are cities where it is difficult to get from place to place.

Cities need people with ideas to solve these problems.

The city needs people with ideas about helping business grow. Businesses compete with each other. So they look for specialists who can help them produce goods and services better and cheaper. The city is where engineers, inventors, office workers, scientists, artists, and others bring their new ideas to help old businesses grow. Their new ideas help new businesses to start. Often businesses move their offices to big cities even though their factories are built in other parts of the country. Businessmen do this so that they can be close to specialists with new ideas.

The city needs people with new ideas about helping others spend their free time. Most people in a city have free time at the same time—in the evenings and on weekends. Big cities have zoos, parks, playgrounds, and ball fields. They have theaters, concerts, lectures, television and radio programs. They have schools, libraries, and museums. These places and programs are for a large number of people with different tastes and income. All these places and programs need thousands of specialists to run and plan them.

Specialists must understand each other

Cities have so many specialists that sometimes it is difficult for them to understand each other's ideas. For example, a specialist who builds roads has ideas about building express highways through a city. Another specialist has ideas about how new highways affect the people of a neighborhood. These specialists should try to understand each other's ideas. If a specialist does not try to understand the ideas of other specialists, he may think that only his own ideas are important.

Men need freedom to trade ideas

People in big cities have fought for a long time to be allowed to talk and write freely about ideas. Many people have given their lives for this freedom. The very idea of freedom for ideas came from city people.

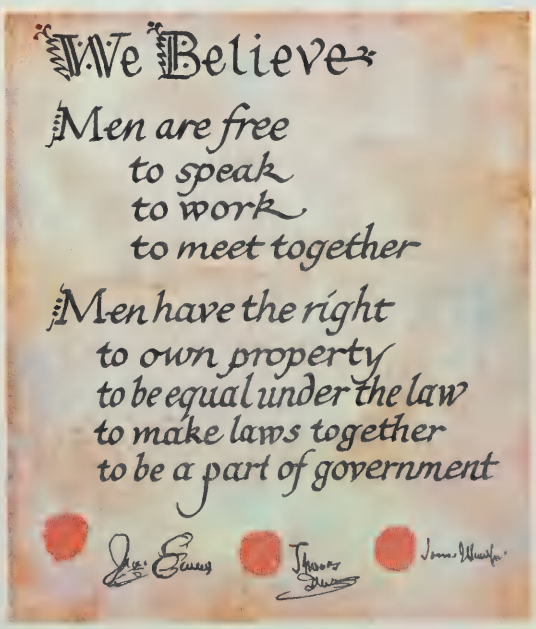
But even today rulers in many countries will not let people speak or write what they really think. In our country, people are free to speak and to write about their ideas. They talk and write about their ideas in their homes, at meetings, on television programs, in books, newspapers, and magazines. Discussions take place all the time. People discuss ideas because the law allows them to speak out.

But mostly they talk because every man has his own special ideas. Each man wants to tell others about his ideas. Each man can learn from the ideas of others. In a city there are thousands of different ideas to be discussed.

When the people of a city are not free to exchange ideas, the cross in the circle can no longer stand for their city. The cross is gone because ideas no longer meet there. The circle stands not for the protection of ideas, but for the walls of a prison.

People with many of the same ideas are drawn to each other in big cities. For example, people who think animals should be treated kindly come together. People who believe that the city government should spend less tax money come together. People who want to help the United Nations keep peace come together. People who believe that the children of the world should be helped come together.

In every big city there are hundreds of clubs and meetings where people come together because they believe in the same ideas.



Ideas spread quickly today

Today big cities and small towns have better ways of passing on and receiving ideas than ever before. Ideas spread through newspapers, magazines, radio, and television. *Teletype*, telephone, and *Telstar* can send ideas from one part of the earth to another within seconds.

Today people of different cities and people of the countryside trade information and ideas all the time. This helps them all to understand each other.

The city is a storehouse of ideas

In the United States, monuments such as the Lincoln Memorial in Washington, D.C., the Statue of Liberty in New York, and the Liberty Bell in Philadelphia help keep ideas alive for us.

A little old house or church standing alone among skyscrapers tells us much about the time when the city was young.

Street or place names such as Wall Street, Ferry Street, Canal Street, Haymarket, and Bowling Green give us ideas of how cities once looked and have changed.

Old papers, books, and pictures stored in city libraries tell us about the ideas of the past.

City museums are very important places. Young and old crowd into museums to look at the work of artists and craftsmen. Museums help us to understand the ideas of people who lived long ago. Museums help us to understand the ideas of people who live in faraway places. We could say ideas are stored in museums.

Pictures, tools, statues, and clothing in the museums show that people in different places and times had different ideas. They had different ideas about building cities. They had different ideas about how to make things. And they had different ideas about how to live together. Men have always studied the past, searching for good ideas.

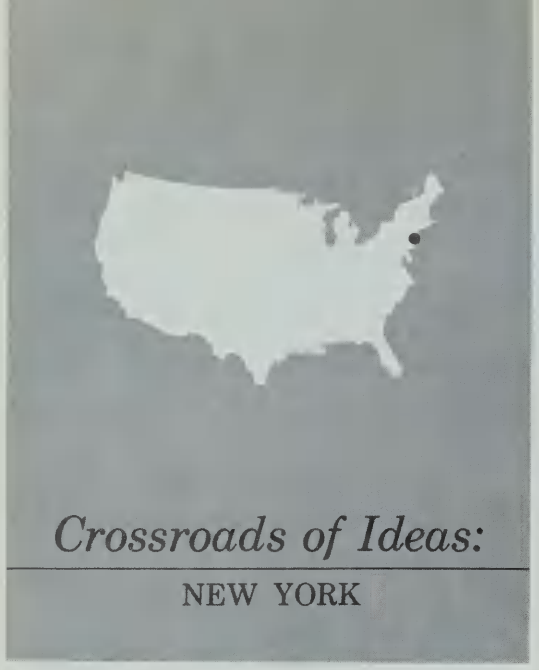
Today people all over the world are searching for better and newer ideas. They never stop trying to find new ideas. They are looking for better answers to the old questions about city living.

How can we build a better city?

How can we produce better goods?

How can we live with each other in peace?

Do you have any new ideas?



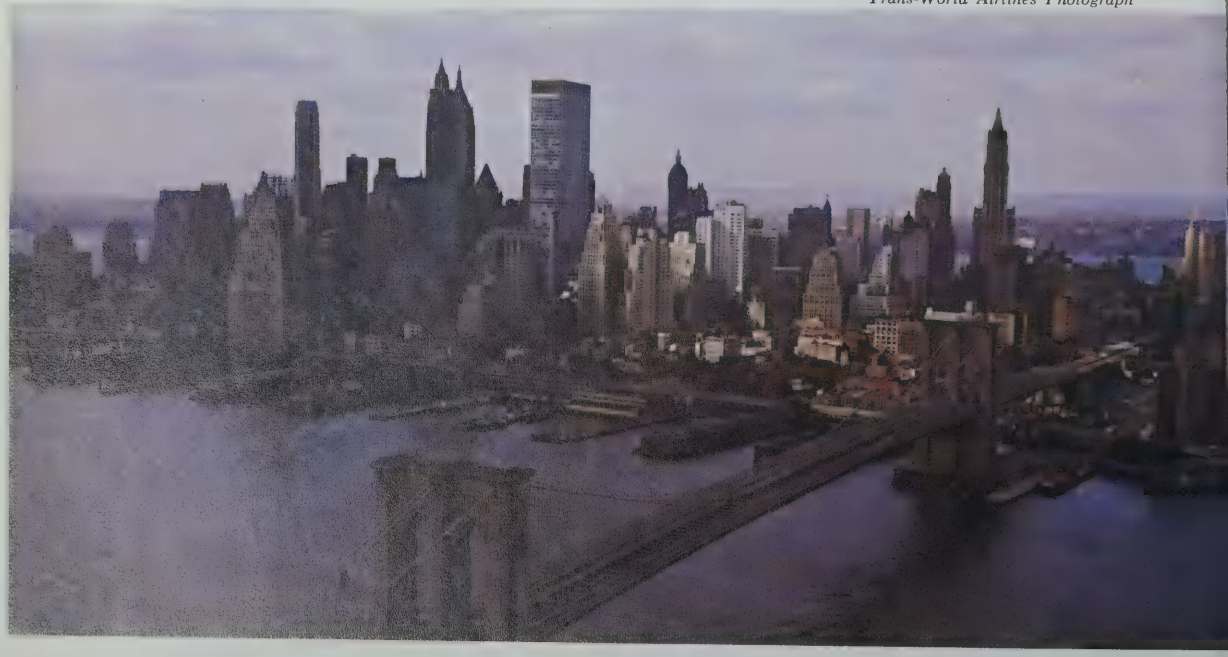
Crossroads of Ideas:

NEW YORK

Here is a giant among cities. By day its tall towers of glass and steel flash in the sunlight. By night its lights shine out across the river to the open sea. This is New York, a marketplace of ideas for the nation and the world.

Within its great buildings doctors work to find new medicines. The heads of companies decide the futures of businesses. And the leaders of nations speak of peace and war. Men make music there and write stories and gather news and ideas from around the world. And everywhere there is talk—on the front steps of old brownstone houses, in the huge modern halls of the United Nations Building. People talk about their problems, their hopes, and their ideas. In New York the air itself seems to be alive with people thinking and talking and doing.

Trans-World Airlines Photograph



Because New York is this kind of place, men and women have come there from all over the world. Many came there to speak freely. They came from countries where they were not free to talk of their ideas. Others came from poor lands where children could not go to school. They wanted their children to learn. They wanted them to be able to get jobs. New York gave them a chance in life for themselves and their children.

The ships that brought them passed the great statue stretching high its lamp of liberty. At its base are the welcoming words:

Give me your tired, your poor,
Your huddled masses yearning
to breathe free....
I lift my lamp beside
the golden door.

America and New York welcomed the newcomers. And the newcomers who chose to stay in New York brought new ideas and energy to the city.

Because New York is a city filled with the ideas of people from all over the world, many people with ideas go there from all over the United States, too.

People who want a chance to share their ideas, a chance to do things, have come from across the nation. Songwriters from Indiana, artists from Wyoming, businessmen from Ohio, architects, bankers, actors, others who want to study, or to find a job where they can use their ideas—they all find their way to New York.

Because they come, New York is where things happen. And because New York is where things happen, more young people go there. As one New Yorker said, "New York is like a ball park. If you want to play the game, this is where you come."

This is New York's Wall Street. It is the business center of the United States. Here business ideas and savings are put to work.

Specialists on Wall Street help people with savings use their savings wisely in business.

New York's Wall Street is the business center of America. It is a neighborhood of offices and banks where new businesses are born and savings are put to work. Here specialists study ideas gathered from all over the nation and the world. They help people with good business ideas to get savings. They help people with savings to find good business ideas. Many businesses start this way.

In one of the offices a man is speaking to a group around a table.

"I think we have too much money in oil companies. This chart shows how much oil will be produced in the next ten years, and how much will be used. Oil will not be used as fast as it will be produced. Oil prices may drop. Oil company profits may drop. I think that we should use the money to build skyscrapers for offices in growing cities."

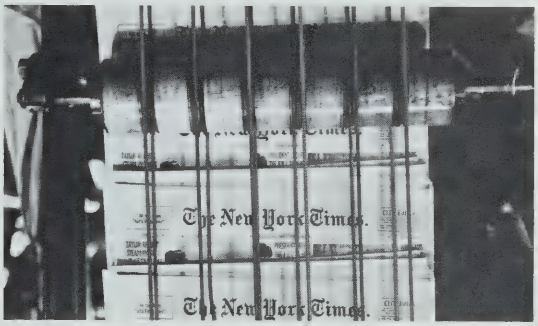
Another man at the table has different ideas about the future.

"I believe that people will have more income in the next ten years. They will buy more cars. More gasoline will be sold. Oil company profits will be good for years to come."

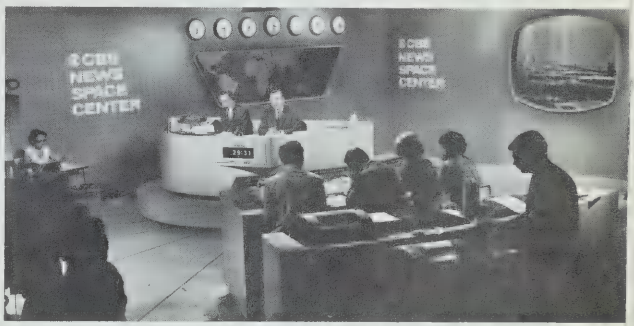
The other men begin to talk. Each has his own ideas. What they decide may change oil production in a far-off country, or lead to more skyscrapers for our growing cities. But they are talking in New York.

New York has many newspapers. They are almost like mirrors. They reflect the ideas and events of the world around them. New York has

News pours into New York. It is written and edited.



Soon the newspapers are rolling off the presses.



This TV program is reporting the news as it happens.

neighborhood newspapers that tell what people are thinking and doing in the neighborhoods of the city. New York has great newspapers that report news from around the world.

News and ideas pour into New York by telegraph, telephone, and teletype. Even pictures are sent by wire. A reporter halfway around the world can get the news to New York in just seconds.

New York passes the word. News and ideas go into newspapers, magazines, and books. New York is a center for TV and radio. Its stations send out programs across the land. New York is a merchant of news. Its news agencies sell news and pictures by wire to newspapers and TV stations all over the world.

Today with TV and radio the Kansas farmer and Vermont housewife can get news in minutes from the jungles of Africa or the rice fields of Asia. Cowboys and bankers, woodsmen and dress models can share the same news and ideas. The whole country is bound closer together by the work of New Yorkers.

New York is a city of study. Teachers and students, doctors and scientists seek answers to many questions: How do children learn? How can men live together in peace? How can we live longer? How can we live more useful

lives? Why do some countries produce more than others? Thousands of questions are asked.

In New York many specialists study these questions. Sometimes many specialists study one question as a team. They help each other find answers by sharing their ideas and the results of their work.

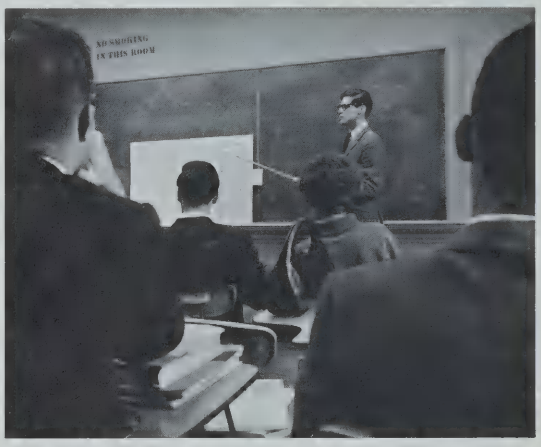
Many of these questions are not new. At different times men have found different answers. Specialists carefully study how people answered these questions before.

They track down these answers in the millions of books and written records in New York's great libraries.

New York is a city of art. It has large art museums. It has many galleries where art is shown. People may look at the paintings and statues there just as they do in the museums. They may buy those that they want.

Students search for answers in the many books and records at New York public libraries.

Specialists search for answers in laboratories.



Others study in New York's schools and colleges.

An art dealer tells of his work.

"In my gallery I show the work of young artists who are just getting started. I want people to see their work.

"I think that New York is today the world center for art. We have so many young artists here with new ideas. Many great artists live here or show their work here in the city.

"The people of the city are learning more about art too. They study about art in school. They read about art in the newspapers. They go to see art. More people than ever before are going to New York's museums and art galleries."

The art dealer is right. The city is rich

Many New Yorkers visit art galleries.

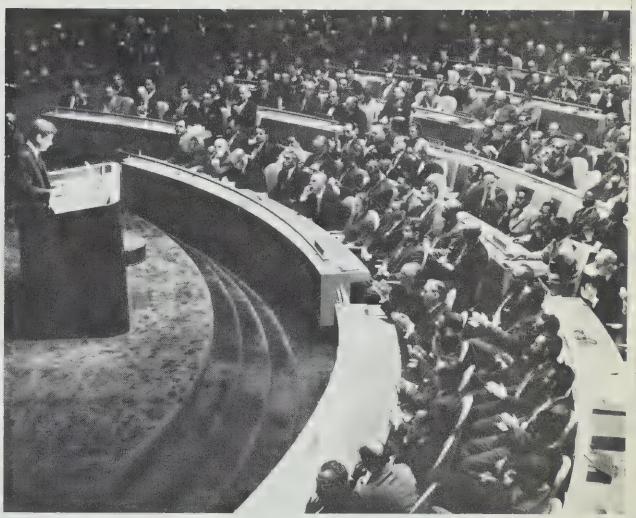
with art. In Greenwich Village there is an art fair every year. Paintings are hung on fences and set out on sidewalks. People come from all over the city. Often they buy a painting. They take a bit of the beauty the city offers into their homes.

New York is a world city. The world's leaders meet in the United Nations Building. Men with different ideas from big nations and small, new nations and old, work together there to make a better life for men all over the world. They even talk about how men can use the moon and planets peacefully. American presidents have spoken there. The heads of many other nations have spoken in the United Nations Building.

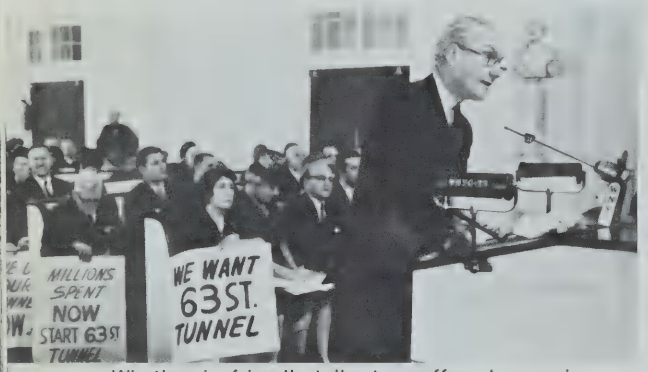
Sometimes the talk seems to go on forever.

"All those guys ever do is talk," says a New Yorker.

"So long as they keep talking, we're all right," answers his friend. "But watch out if they ever stop."



The world meets in the United Nations Building. John F. Kennedy (above) and other U.S. presidents have often spoken at the United Nations.



Whether in friendly talk at a coffee shop or in demands made at the City Council, the talk of New Yorkers reflects their ideas.

People talk of little things, too. On the front steps of an apartment house in Brooklyn a man is talking.

"We should have a park in this neighborhood. The children need one. And I want a place to take it easy."

A fat man answers, "We have a park, Prospect Park."

"Prospect Park is too far."

"So stretch your legs a little. It's not that far."

"For the children it is," says a woman. "The city should make a park."

The fat man laughs.

"The city doesn't have the money."

"It does too!" says a student. "If the mayor would only plan better. . ."

Across the river in City Hall the mayor is speaking.

"We are short of tax money. We need more money for parks, for the police, for schools. Too many people are moving to the suburbs. We must make the city a better place."

An angry council member stops him.

"That's all we hear, more money! Sure, people are moving to the suburbs. Taxes are too high here. The more people move out, the less money we have. There has to be an end to higher taxes."

The mayor nods. "I know that, but we just have to have the money. We have to have these things . . ."

Uptown at the Poetry Center on 92d Street a poet has just finished reading some of his poems. The crowd is asking questions.

"Why don't you write poems for young people?" a blond girl asks.

The poet smiles. "I thought my poems were for young people. I think about them when I write."

A young man jumps up.

"That isn't so!" he shouts. "Your poems are not for the young. You speak to old people."

Others take the poet's side. The room buzzes with questions and ideas.

On the other side of Central Park, at Lincoln Center, another room is hushed and quiet. More than a thousand music lovers are there listening to a concert played by the New York Philharmonic Orchestra.

Leonard Bernstein leads the New York Philharmonic.

As the music ends, a man says to his wife, "It was worth the long trip here."

She nods with pleasure.

Just across the plaza, in another part of Lincoln Center, others are watching a play. The actors have come from Germany. The play was written nearly two hundred years ago by a great German writer, Schiller. New Yorkers can enjoy it now.

On still another stage a Russian ballet is being performed. The music is lively. The dancers seem to fly across the stage. A girl spins in a blur of white lace. The curtain falls. People clap and cheer.

"I waited two months for this night," says a young man.

"Yes," his girl friend answers. "I'll remember this for a long time."

They walk off into the night and the city. All around them are ideas, talk, plays, music. It's all there in New York, a great city.

Young Philadelphia

When our country was very young, people came to it on sailing ships. Some of the people moved into the deep forests. There they cut down trees and cleared the land for farms.

Some of the people settled where a river flowed into the ocean. This is how many of the early cities in our country began. Philadelphia was one of those early cities.

When Philadelphia was fifty years old, 15,000 people lived there. It was small in size. Yet it was a great city. It was great mostly because of the people who lived there.

The people of Philadelphia came from many countries. They were people with different skills, beliefs, and ideas. They were English, German, Scottish, Irish, Swedish, Dutch, and African.

There were many hardworking craftsmen. There were merchants who had grown rich from trade. There were poor people. There were slaves.

In living together these people discovered that they had different ideas. In talking together they discovered that often their ideas changed. New ideas grew out of their talks.

Over the years, many more sailing ships came to Philadelphia. They came from New York, Boston, Newport, Charleston. They came from England, France, and Holland. People, books, newspapers, and letters brought new ideas from these places. The ideas spread

in Philadelphia. They spread to the countryside around the city.

Ideas that were born in Philadelphia were carried to other cities.

People usually discover or learn about new ideas in school. In the private schools of early Philadelphia, children learned little about nature. They learned little about the way people can work together. They learned little about the work that they might do when they grew up.

Some people with new ideas wanted a new kind of school where children could learn how to be useful citizens. Many important people were against this new idea, but it spread anyway. From this idea grew the public schools of Philadelphia.

Another very important way that ideas spread was through newspapers. One of the early newspapers in America was printed in Philadelphia by Benjamin Franklin. It was called *The Pennsylvania Gazette*. Mr. Franklin was a man of ideas. He studied men and nature. He was an inventor. Later he served his city and country in government.

Mr. Franklin's newspaper was very popular. He could write well. He wrote about ways that cities or nations should be governed. He wrote about ways to improve farming and about ways to make Philadelphia a better city. Often he wrote about new discoveries in nature.

Once a young doctor visited Mr. Franklin. The doctor had an idea he had learned about in London. There should be a hospital in Philadelphia. Hospitals were a new way in America to care for the sick. But no one would listen to the doctor—except Benjamin Franklin.

Mr. Franklin wrote many newspaper stories about how a hospital would help the city. Many people were against the idea. But Mr. Franklin did not give up. After a while many people gave money for the hospital, and it was built.

Another time Mr. Franklin had an idea about money. He printed his idea in a *pamphlet*. At this time many people who had ideas printed them in pamphlets. Many important ideas spread this way.

Mr. Franklin wrote that money was important for trading. He said that as more and more goods are produced, more and more money is needed for trading. Mr. Franklin thought that there was not enough money for trading. At that time workshops were beginning to produce more goods. But the amount of money to buy with stayed the same. Prices would have to drop so that people could buy the goods with the same amount of money. But if prices dropped, shops and factories would lose money. Many of them would produce fewer goods. Workers and workshops would become idle. This would be bad for business and the country. Mr. Franklin thought that there must be more money when there are more goods produced. He thought that the government should print more paper money as factories produce more goods. But the government should print only enough money to keep prices from going down. The government should not print too much money. That would make prices go up. His idea spread. Today most governments use this idea.

This is a Franklin hand press. Many pamphlets and books, printed on such a press, helped spread ideas throughout America.

Philadelphia had many clubs. Many people who were interested in the same things belonged to the same club. One club in Philadelphia, called the Junto, became important in the history of the city. Yet only twelve young men belonged to it. What did they do? They listened to each other's ideas. They tested their ideas on each other.

Most of the members of the Junto had spent only a little time in school. But they learned how to study and how to think by themselves.

One of the young men was a farmer

named John Bartram. He was so interested in the plants of America that he went on long and dangerous trips to collect them. He brought back strange seeds and plants. He built a garden in the city where people could see the rare plants. He wrote reports about the plants and the places he had explored.

Another member, Thomas Godfrey, was a glassmaker. He had gone to school just long enough to learn how to read, write, and count. He studied mathematics by himself. As a result of his studies, he invented a tool that helped seamen find out where their ships were at sea.

The members of the Junto decided to pay a small amount of money to the club each year. The club bought books with this money. In this way each member could read many more books than he could afford to buy. As the years passed, more and more books were added and a library grew. Many people liked this idea. Other book clubs were started in Philadelphia. The idea spread to other cities. And this was the idea that helped start the public libraries we find in all our cities today.

There were other people in Philadelphia like these young men. America was an exciting place for these people. They were curious about the flowers, animals, soils, streams, rocks, and mountains of the New World.

These people explored. They had ideas. They tested their ideas. They shared their ideas. When they needed tools for their work, they built them with their own hands. They used their discoveries to improve farming and trade. They used their ideas to make living more comfortable and enjoyable. Knowledge should be useful, they thought. People who put so many ideas to good use helped Philadelphia become one of the most important factory and trading cities in the world.

Benjamin Franklin held many jobs in government. He served as United States Minister to France. Here he is shown being honored at the French Court.

The people of Philadelphia learned how to speak their ideas freely. They learned how to respect people who had different ideas. They had new ideas about how cities and nations could govern themselves.

Some of these ideas were the seeds from which the highest law of our land —the United States Constitution—grew.

Why a City Grows

LESSON 5

New York in 1651

Philadelphia in 1702

These are pictures of some big cities when they were young. Most of the cities of the United States began as small villages or towns.

Long ago most of the people of our country lived on farms. As time passed, many left the farms. They settled down in villages. Many of the villages later became towns. Some towns became cities. A few cities became very big cities.

San Francisco in 1846

Wichita, Kansas, in 1873

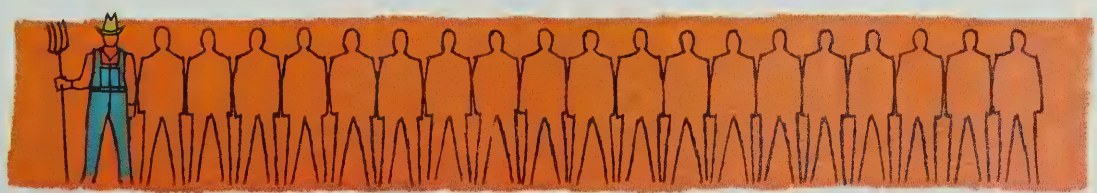
Why did people move away from farms?

Farmers found that they could produce more and more food. They used newer and better machinery. They learned more about producing better food. Men developed new seeds and better fertilizers. The farmers produced so much food that the city people could not eat it fast enough!

In the cities, factories and offices produced goods and services faster than ever before. The incomes of city people went up. They spent some of their extra income for more and better food. But they spent most of their extra income on the goods and services produced in the city.

Fewer farmers could produce all the food that city people needed. So, many people left the farms. They came to the city. They found jobs in factories, stores, and offices.

Today more people in the United States live in cities than on farms. Only one out of every twenty persons is still a farmer. Millions of farmers have moved to cities to find jobs. Cities keep growing.



Today, one out of every twenty people is a farmer

What helps a city grow?

The most important thing that makes a city grow is trade. And trade depends on transportation. A city with good harbors and railways, highways and airports can trade with other cities. People who want to start businesses choose this kind of city. Businessmen will want to have their factories and offices there. And so the city will grow.

Many kinds of businesses help a city grow

A city with many different kinds of businesses will grow faster than a city that depends on only one business. A city with many businesses can attract more people and more new businesses. This is because the city offers many choices to workers and companies.

Men with different skills will come to work where many different skills are needed.

Businessmen choose places where skilled workers live. New businesses bring new jobs. New jobs bring more workers to the city.

Making finished goods helps a city grow

Now let us imagine two cities, Slowtown and Busyville.

Slowtown is beside a river. It has only one railroad. Most of the people earn

SLOWTOWN

income by mining iron and cutting down trees. The iron ore they mine and the trees they cut are bought by businessmen in other cities.

Slowtown is a producer of raw materials.

Busyville is also beside a river. Many trains come to Busyville. Good highways connect Busyville with many cities. It also has a busy airport.

Busyville has plenty of good land to grow on. There is plenty of electric power to run factories. Skilled workers live there. Businessmen who are willing to risk their savings live there. These businessmen buy iron ore from Slowtown. The iron ore is used to make steel in Busyville's steel mills. Other businessmen in Busyville buy steel for their pipe factories, for their pot-and-pan factories, and for their machine-tool factories.

Busyville businessmen also buy lumber from Slowtown. They use the lumber in their furniture factories, paper factories, and plywood factories.

The businessmen and workers of Busyville turn raw materials into finished goods. Their work earns them high incomes. They spend a large part of their income in Busyville. All the businesses in Busyville profit.

Slowtown and other cities that sell only raw materials will not grow as fast as cities like Busyville, which turn raw materials into finished goods.

BUSYVILLE

Selling to other cities helps a city grow

There are cities that sell most of their goods and services to the people at home. The businesses in such cities are usually small. These cities change very little. Some cities produce goods and services not only for the people at home but also for people in many other cities. A city that produces goods and services for other cities gets income in return. The more goods and services a city is able to sell to other cities, the faster businesses in the city will grow. More people will find jobs and earn income in the city.

Good building land helps a city grow

Sometimes the growth of a city depends on the land the city is built on. If a city is between tall mountains, there may be very little land for buildings. There may not be enough flatland to build big factories. Without factories, cities will usually stay small.

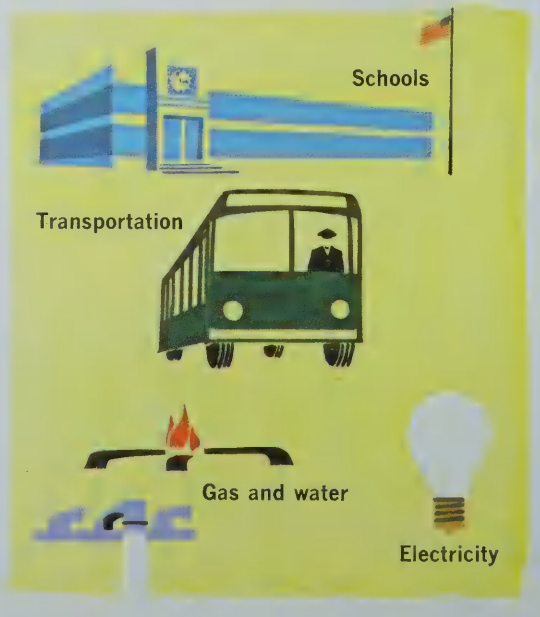
The countryside helps a city grow

Rich farms, villages, and small towns around a city can help it to grow. If people around a city earn a good income from farming, mining, lumbering, and vacation places, they will spend part of their income in the city.

They go to the city to buy goods and services. They buy everything from medical care to tractors. Farmers come to the grain elevators in the city to sell their grain. Offices in the city serve the mines, the lumber mills, and the vacation places. All these businesses serving the countryside give jobs and income to the people of the city.

Good government helps a city grow

Government in a city can help a city grow. One way it does this is by helping business grow. Businessmen look for cities that have land, water, gas, electricity, transportation, and good schools. The city government can help businesses by planning. The government must find out how much land, water, gas, electricity, and transportation will be needed by new businesses. The government must find out how many schools will be needed for new families. By planning ahead in this way, the city government can help the city grow.



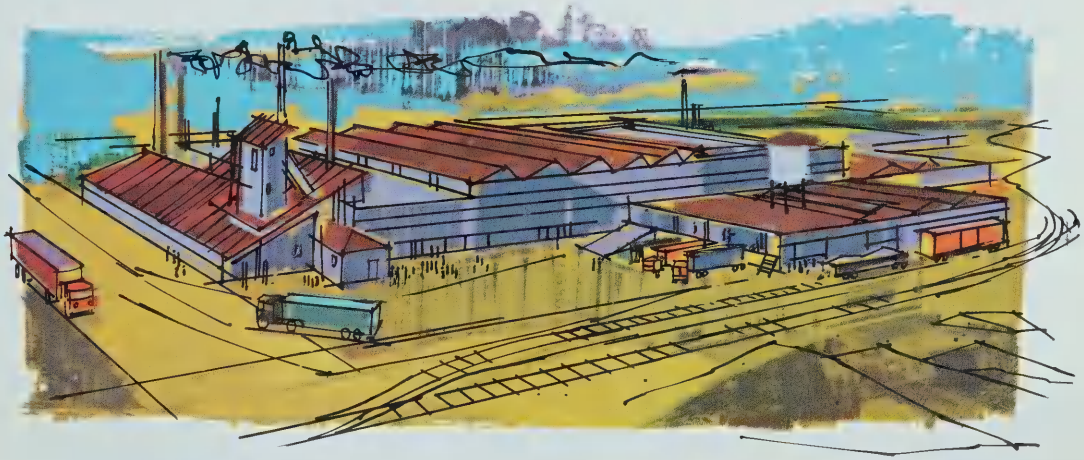
Growing businesses help a city grow

The way businessmen run their businesses affects the city. Business will grow if the businessmen look for new and better ways to produce goods and services. A growing business needs more workers. More stores and offices are needed to serve the workers. The city grows.

A businessman must use new ideas or he will not be able to sell his goods or services. Other businessmen in other cities will produce better goods or services at a lower price. The businessman will be left behind. He may have to close his business. This will hurt the city.

Business and government must put new ideas to work in the city. Without new ideas at work in the city, new people and businesses will not move in. People and businesses may move away. The city will stop growing. Then a busy city may shrink to a pokey town. It may even fade away to a ghost town.

A Growing Business Helps a City Grow



There will be more jobs

More homes will be built

There will be more tax money

There will be more sales

The Space City:

HOUSTON

Far above the earth an astronaut "walks" beside his orbiting spacecraft. He is an explorer in space. He is learning to live where man has never lived before.

On earth millions of people stay close to their radios and television sets. They listen and watch.

A voice says, "And now we switch you to the Manned Spacecraft Center in Houston, Texas."

From Houston, people hear reports on the space flight from scientists, engineers, and doctors.

Space flights begin at Cape Kennedy, but men in Houston control them. Men at the center talk with the astronauts.

The Manned Spacecraft Center in Houston.

Scientists and engineers study every movement. They check space suits and other equipment. Doctors listen to heartbeats and breathing.

Radio messages about the flight come from ships, planes, and tracking stations all over the world. At the center huge computers help men study these messages.

Houston is called the Space City. Flights are controlled, astronauts are trained, and space equipment is designed there.

Each time an astronaut *orbits*, hundreds of specialists in Houston learn more about traveling to the moon and to the planets.

The government of the United States has spent millions of dollars on the Manned Spacecraft Center. Many cities wanted the center. Why did the government choose Houston?

There are many reasons. Houston has businesses and factories that can help the Spacecraft Center. The businessmen of Houston know how to work with scientists and engineers on new ideas. Many of these specialists live in Houston.

Houston also has a large and busy seaport. It is an important trading center. Ships, boats, barges, trains, airplanes, and highways connect Houston with the rest of the country and with the world.

There are many fine colleges and universities. There is a medical center where experiments in space medicine have already been made.

The land around Houston is flat. This gives the city much room to grow. Houston can provide the large amounts of electricity and water needed for new homes and industries.

Because Houston's climate is mild, people can work or play outdoors all year round.

Rice University is one of the fine colleges and universities that are found in Houston.

This is one of many nature rooms in the Houston zoo.

Houston has many fine theaters, orchestras, art galleries, a zoo, and a planetarium. Baseball and football games are played in a stadium that has a huge dome over it.

These are the reasons why Houston became "Space City, U.S.A." Many, many people have moved to Houston. New buildings have been built. New businesses and industries have grown up around the Spacecraft Center.

Houston is a young city. But it has grown fast.

Thousands watch a baseball game in the Astrodome.

More than one hundred years ago, Houston began as a trading town for settlers. It was a little port on a stream called Buffalo Bayou, fifty miles from the ocean. Flatboats and barges brought supplies up the river to the settlers.

Lumbering was the first large industry around Houston. Then ranchers began to raise cattle, and farmers began to grow cotton.

The settlers brought their products to the little town to sell. With the money they received, they bought food, clothing, and other goods they needed.

Soon the settlers were producing so much that they had to find new markets for their goods. They needed cheap transportation, but there were no railroads then. The cheapest and easiest way to move goods was by water.

How wonderful it would be, the settlers thought, if the Buffalo Bayou could be made wider and deeper. Then ships could bring supplies right to Houston and take Houston's products to markets all over the world.

At that time Galveston was the ocean port for Houston. Barges and riverboats carried goods between Galveston and Houston. Reloading goods at Galveston took time and cost a lot of money.

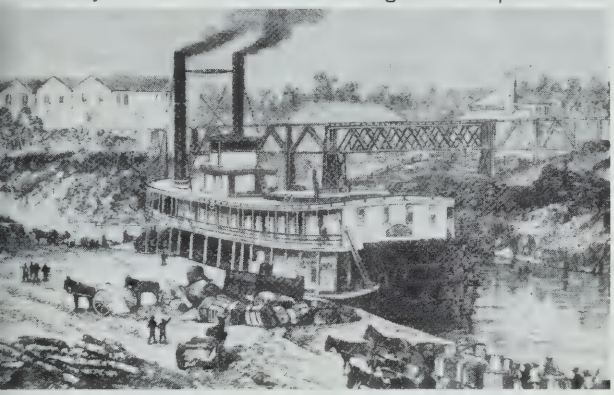
For many years the people of Houston worked long and hard to deepen the bayou. They did not succeed.

Then in 1900 a huge hurricane and tidal wave destroyed the Galveston harbor.

Now, Houston had no choice. It had

In 1840 Houston was a small town on a quiet river.

By 1859 the cotton trade brought boats up the river.



By 1894, goods were shipped by many railroads.

In 1927 many buildings went up in growing Houston.

to widen and deepen the river. The mayor of Houston, some businessmen, and some ranchers decided to go to Washington and ask the Congress of the United States for help.

The Congress said it would cost too much money to make a deep channel of Buffalo Bayou.

"Well," the mayor said, "if that is too much for Uncle Sam, we will help you pay for it. For every dollar you spend, we will spend a dollar. We'll split the cost."

"If you want a harbor that much," said the congressmen, "you certainly shall have it."

The bayou was widened and deepened. Houston became a world port. Today the Houston harbor is one of the busiest fifty miles in the world.

Products from other states are shipped by train, truck, and plane into Houston. There they are sold to other countries and loaded on the ships.

Ships that come to Houston from other countries bring coffee, sugar, rubber, newsprint, molasses, and many other products.

Some of the goods just move through Houston on the way to other places. Other goods are processed and made into different products.

Along the channel are shipyards, meat-packing plants, cement factories, flour mills, and a steel mill. There are fertilizer factories and many chemical plants. There are also factories that make machinery for oil wells.

More oil refining is done near Houston than anywhere else. This refinery is just outside Houston.

At night the sky over the channel is bright from the lights of oil *refineries.* The refineries work day and night to change *crude oil* into many different products. These products are sent all over the world.

Even before Houston had its deep-sea channel, oil had been discovered nearby. But at that time there was little demand for oil products.

About the same time that the first ships were moving into Houston's harbor, the automobile industry began in another part of the country.

At first cars cost a lot. Then Henry Ford had the idea of producing them on the assembly line. He was able to produce them faster. They became cheaper. Now many people could buy cars.

Farmers as well as city people bought cars. This made it easier for farmers to haul their products to market. Tractors, too, were made on the assembly line. These helped the farmers produce more with fewer people.

As more people bought cars and tractors, they needed more gasoline to make the cars and tractors run. Gasoline is made from oil.

Scientists and engineers find new ways to get oil wherever it may be. This well is in the ocean.

The demand for oil rapidly increased. Oil was called "black gold." Everyone wanted to find oil now. The hunt for oil began.

Houston businessmen, farmers, and cattlemen used their savings to buy machines to drill for oil in the earth. Some were lucky. When they found oil buried deep in the earth, they became rich. Many lost their savings on dry holes.

Savings from all over the world poured into Houston. This money was used for drilling wells and building refineries.

Night and day, wells pump up crude oil from deep in the earth and from the bottom of the ocean.

Scientists have discovered ways of breaking up crude oil to make many products besides gasoline.

Engineers found a way to send oil and gasoline cheaply over long distances. They made a special kind of steel pipe and welded many pipes together. These pipelines were laid underground. They lead to cities in the North, South, East, and West of North America.

If you could look under the ground at Houston, you would see another kind of pipeline. These are used by over a hundred chemical plants. The crisscrossing pipelines look like a bowl of spaghetti. The people of Houston call this tangle of pipelines "the spaghetti bowl."

Gases, oils, and salt water are pumped into the pipes. These materials make their way to the different plants. Each

Many gas and oil pipelines are built from Houston to cities all over North America.

plant takes or uses part of the materials to produce a product. Each plant passes on the rest of the materials through the pipelines. One plant's *by-products* become another plant's raw materials.

The products of these plants are used to make such things as paint, plastics, tires, soap, nylon, and medicine.

Houston has good land for farming. And the farmers have learned to produce more food by using machinery, improved seeds, and fertilizer. As Houston grows, less land is left for farming. But the cattle are bigger and the cows give more milk. More cotton is grown.

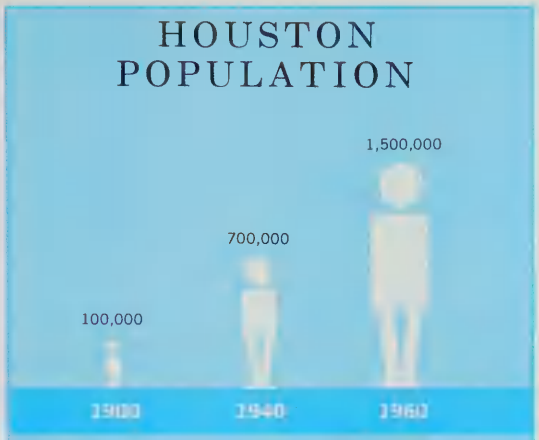
Today many farm children are able to move to the city and study. In Houston they learn how to become scientists and secretaries, teachers and nurses, doctors and office workers.

Our story tells us that Houston is a growing city. Our story tells us why Houston is growing. Our story also tells us why so many people want to go to growing Houston.

Buffalo Bayou was widened and deepened so that ships could get to Houston from the sea.

Ships carrying goods from all over the world crowd into the port city of Houston.

The value added to raw materials by men and machines is one way to measure the growth of Houston.



Population growth is another way to measure the growth of Houston. Few cities are growing so big so quickly.

More and more people go to Houston to work at jobs at the port. They operate huge machines to load and unload the ships.

More and more people go to Houston to provide goods and services to the farmers. They produce and sell fertilizer, seed, and machinery.

More and more people go to Houston to work in the oil industry. Some go to hunt for oil. Some go to drill the wells. Some go to refine the oil. Others go to sell it.

Some people go to design, produce, and sell drilling tools and machinery. They go to produce steel for the tanks, tools, and pipes. People go to work in laboratories. Here they search for new ways to develop more new products from crude oil and from chemicals.

More and more people put their savings to work in Houston's businesses. They are looking for new business ideas.

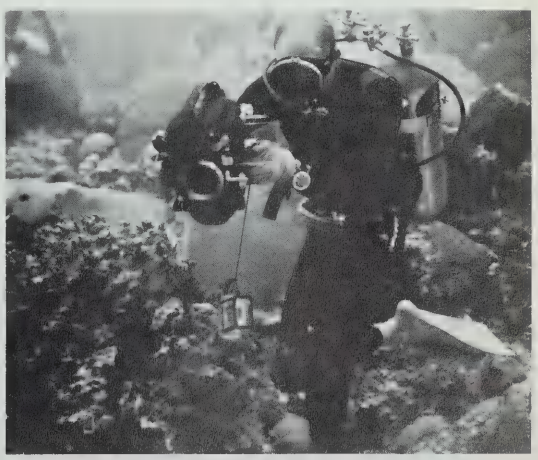
More young people go to Houston to study at the universities. They will become the scientists and engineers needed in the space program, oil industry, and other businesses.

Houston has grown fast. It keeps on growing. When a city grows as fast as Houston, it can have growing pains. The city planners and public officials must work hard to keep Houston a pleasant place for everyone.

People like to call Houston the Space City. Soon it may have a new name. Hundreds of scientists and engineers there are now exploring the ocean's depths.

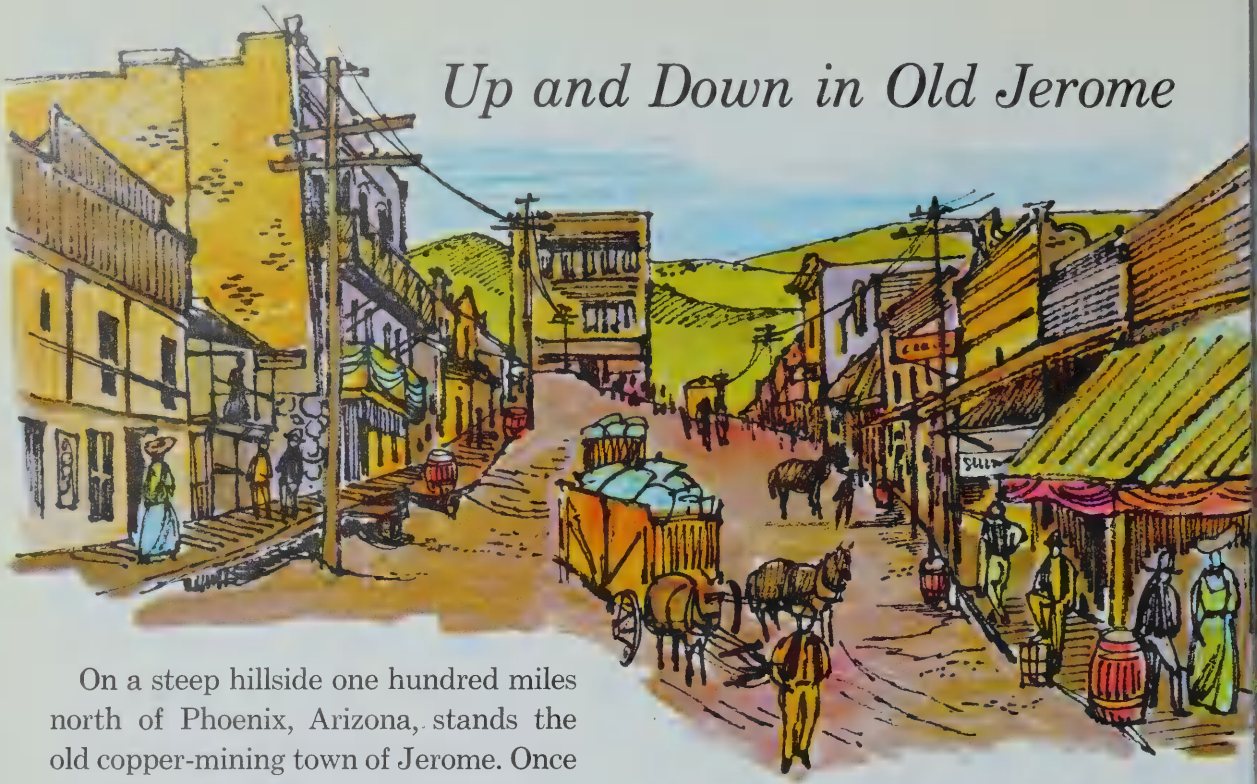
What new materials will they find? What discoveries will they make? What new choices will be given to man?

Houston is a city of change. Houston is a place where businessmen, scientists, engineers, and others are the explorers. In Houston men explore the earth, the skies, and now the ocean's depths.



This scientist is studying the sea near Houston. The future may depend on him as much as on astronauts.

Up and Down in Old Jerome



On a steep hillside one hundred miles north of Phoenix, Arizona, stands the old copper-mining town of Jerome. Once it was a busy, exciting place filled with thousands of rough-and-tumble miners.

Today fewer than three hundred people live in Jerome. Most of the buildings are empty and falling apart. The town is spooky. It looks as if ghosts live among the ruins. People call Jerome a ghost town.

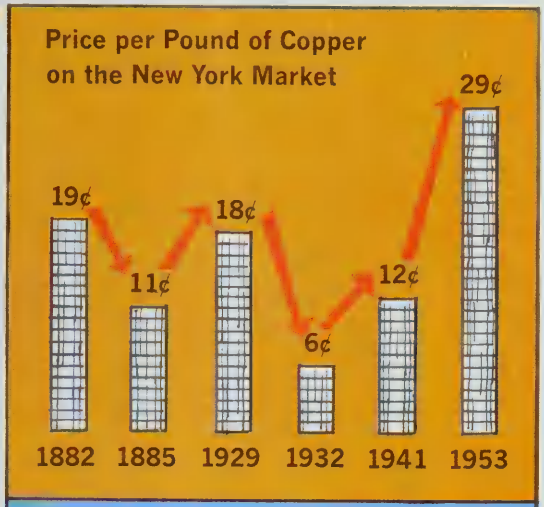
Jerome grew when the world began to need copper for new machines and motors, and for wires that carried electricity to factories and homes.

Over the years the people of Jerome had good times and bad. When the price of copper went up, the Jerome mines earned a profit. They hired more workers. The town grew. When the price of copper went down, the mines could not earn a profit. Miners were laid off. People left Jerome.

Why does the price of copper go up and down? It depends on what happens in big market cities such as New York. Buyers and sellers of copper are scattered all over the world. It is easier for these buyers and sellers to trade in one place. New York is such a place. New York has big banks and shipping companies that help the buyers and sellers of copper to trade.

When lots of copper is for sale in New York, and few factories want to buy it, its price goes down. When this happened, times were bad for Jerome. When many factories want to buy copper, and there is not so much of it for sale, its price goes up. When this happened, times were good for Jerome.

To see just how this happened, let's look at Jerome.



The Price of Copper on the New York Market Goes Up and Down.

Arizona was still Indian country in 1876, when a few miners found copper on the steep hillside above the Verde River. There were no roads or railroads nearby. The little bit of copper the miners could get out to market on mules earned them very little income. Sadly, the miners decided to sell the mine for a few thousand dollars.

Governor Tritle of the Arizona Territory became interested in the mine. But he knew it would cost lots of money to build roads and bring in the tools needed to develop the mine.

Tritle found the money in New York. Eugene Jerome, a young lawyer, got together a group of wealthy men who were willing to risk some money to develop the mine. He asked that the town that would grow up around the mine be named for him. And so Jerome got its name.

Eugene Jerome's company began work in 1883. Roads were built to a railroad line miles away. Parts for a small smelter were brought in by wagon. The smelter was needed to separate the copper from the waste material in the ore. Miners' tents soon dotted the hill.

All went well for about a year. Then the copper market played its first trick on Jerome. Other new mines began to produce lots of copper. Jerome's copper had to be taken over rough wagon roads. Supplies had to be brought back to Jerome the same way. Transportation costs were high. All of the other mines were right on the railroad. Their transportation costs were lower than Jerome's. The new mines could sell copper at lower prices than Jerome could. The price of copper dropped from nineteen to eleven cents a pound. The Jerome mine could not make a profit at such a low price. The mine had to shut down and the miners drifted away.

Eugene Jerome and the other men in New York decided to sell the mine. The man who bought it was William A. Clark, who had already made millions of dollars in copper mining in Montana. Clark believed the Jerome mine was very rich. He was willing to risk a lot of money. He had tunnels drilled deeper into the mine. He found rich new bodies of ore. He built a railroad to connect with the main railroad across Arizona. He built a large new smelter. Now Clark could produce copper at a lower cost per pound. He put the mine back to work.

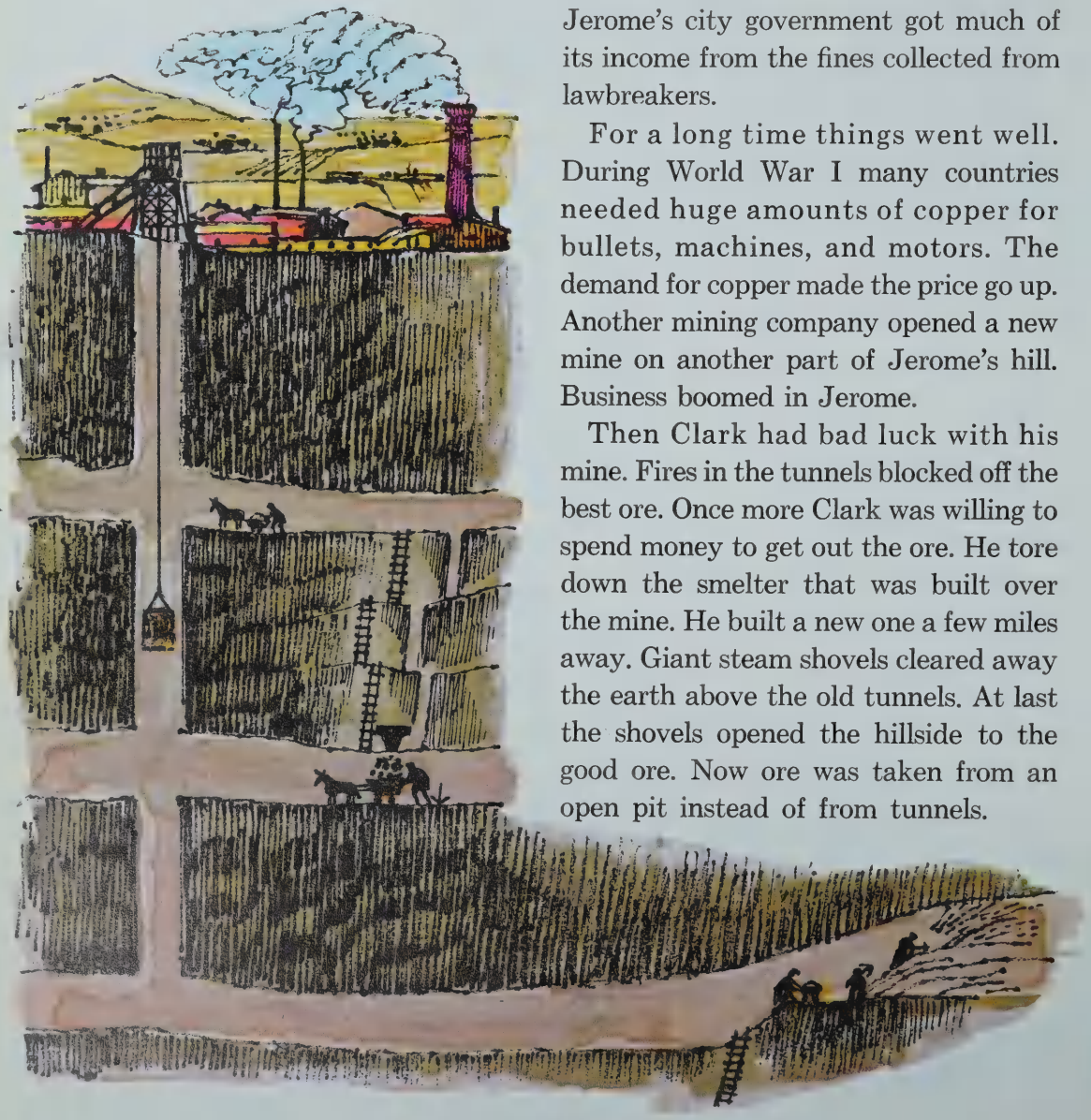
From the huge amount of high-grade ore he mined, he soon got back far more money than he had spent.

Thousands of miners came. They dug and blasted in the dusty mine. Wooden houses instead of tents were found on the hillside. The fronts of the houses were built on the ground, but the backs were held up by stilts. Stairways were built from one street to the next.

Three big fires swept through Jerome. People decided to work together to make Jerome safer. They set up a government, and Jerome became a city. Laws were passed. But the rough miners did not always obey the laws. Some of the toughest lawmen of the Old West were hired to keep order. For many years Jerome's city government got much of its income from the fines collected from lawbreakers.

For a long time things went well. During World War I many countries needed huge amounts of copper for bullets, machines, and motors. The demand for copper made the price go up. Another mining company opened a new mine on another part of Jerome's hill. Business boomed in Jerome.

Then Clark had bad luck with his mine. Fires in the tunnels blocked off the best ore. Once more Clark was willing to spend money to get out the ore. He tore down the smelter that was built over the mine. He built a new one a few miles away. Giant steam shovels cleared away the earth above the old tunnels. At last the shovels opened the hillside to the good ore. Now ore was taken from an open pit instead of from tunnels.



With two mines producing, Jerome had good times again. By 1929 there were 15,000 people there. But in that same year, times became bad all over the country. People did not buy all the goods that factories produced. Many factories closed. Those that used copper stopped buying it or bought much less. Copper prices dropped from eighteen cents a pound in 1929 to six cents a pound in 1932. Most of the mines closed. Miners went off to look for other jobs. Fewer than 5000 people stayed in Jerome.

A few years later times began to get better. A big company bought Mr. Clark's open pit and began working it.

In 1941 the United States went to war again. So much copper was needed that most of the good ore was taken from Jerome's hill. The ore that was left had too little copper in it. The price of copper was going up, but this did not help Jerome. Production costs were too high at the Jerome mine. The mine closed.

Today many tourists go to see the beautiful red-rock mountains and to walk the streets of a town filled with empty and ruined buildings. The town is spooky. It looks as if ghosts lived among the ruins. People call Jerome a ghost town.

What Keeps People Together? What Keeps People Apart?

LESSON 6

Huge buildings tower over the busy city streets. The buildings are crowded with people. The sidewalks are jammed. Thousands of people are on the move in the city. Each person has some place to go, something to do, some reason to hurry. Cars hum, buses rumble. Trucks and trains roar.

To many people who come from farms and small towns, big cities are frightening. There seems to be no order. Everything in the city seems to be in a jumble.

The division of labor keeps people together

People who study the city know that there is order underneath the hurry and flurry. They know that in many ways a city is like a clock. A clock has hundreds of parts that fit together and work together to run smoothly.

The city works like a clock because the work is divided among thousands of different specialists. Because of the division of labor, people depend on each other. This helps to shape the way people behave toward each other.

Every morning hundreds of thousands of city families depend on the milkman for fresh milk. They depend on the specialists at the water plant for pure water. City people depend on many businessmen to collect food, to store it, and to sell it.

The services of some city specialists must go on day and night, summer and winter, without stopping.

People expect each other to do their jobs well. Why do most people in the city do their jobs well? They do their jobs well because they hope to earn a *reward*. People who do their jobs well earn the respect of other people. They may earn a higher income. They may earn a profit.

Customs, rules, and laws help keep people together in the city

Customs, rules, and laws guide people in the way to behave. It is a custom for most people to shop during the daytime. Good businessmen follow this custom and keep their stores open during the daytime. Customers can depend on these businessmen. The customers know when the stores will be open. The businessmen are rewarded with profits.

People also follow rules in their work. A rule in a factory tells people when to come to work. A bus driver must follow a rule that tells him when and where to drive his bus. If he does not follow these rules, he may lose his job.

There are laws that tell parents to send their children to school. There are laws that tell grocers and restaurant owners how they must handle food to keep it clean. There are laws that tell what factories and families should do with wastes to keep the city healthy. If people do not follow the laws, they may be punished.

Customs, rules, and laws help people to work together in the city and to depend on one another.

Common interests draw people into groups

Many people in cities come together because of *common interests*. They come together to protect and strengthen their interests.

A doctor may join a group of doctors because he wants to be sure that only people with the right kind of training become doctors. Businessmen may form a group to get more customers to shop downtown. Workers may join a union to work together for higher wages and better working conditions. Doctors, businessmen, and workers as parents may join with other parents to work for better schools. Doctors, businessmen, and workers may form a group to keep taxes low. Doctors, businessmen, and workers who have the same ideas about how the government should be run may join the same political party.

Groups may not agree with each other

Sometimes groups of people may disagree with other groups. Some groups may want their city to grow and have more factories. Other groups may want to keep the city a quiet place, without factories. Some groups in the city may want to build one very big school for many neighborhoods. Other groups may feel that a smaller school should be built for each neighborhood.

When groups disagree or have *conflicts*, they may come together to settle their differences. They may argue. Both sides may give in a little. Sometimes one side gains more, sometimes the other. It is natural for people to have ideas of their own and to have different interests.

When groups talk together, it is good for the city. But sometimes one group is so strong that it thinks it does not need

to listen to other groups. People in the other groups may feel helpless or angry. This is bad for the city.

Talks between groups that are in conflict go on all the time. In homes, at meetings, in newspapers, and on television and radio, people discuss why they disagree.

The common interests of a neighborhood may keep people together

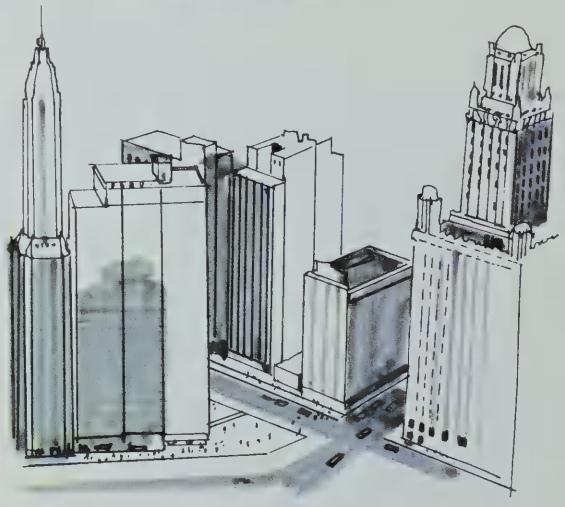
In most cities, the people of a neighborhood are alike in many ways. They often have about the same income. They may have come from the same countries. They may be of the same color. They share the same services—schools, streets, stores, parks, libraries, fire and police protection. These services may be better in some neighborhoods than in other neighborhoods. In many neighborhoods, people work together to get better services for their neighborhood.

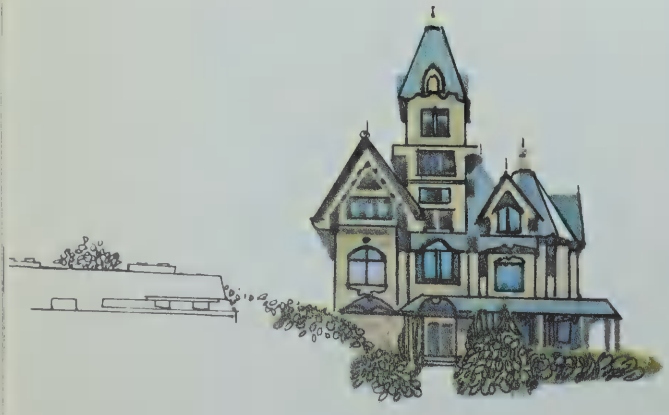
Different neighborhoods may have conflicts with each other

Neighborhoods made up of families that earn low incomes often do not have good services or places to live. The families live in crowded houses. Children do not have open spaces to play in. The streets are not kept clean. The school buildings are run-down.

Often, people live together in such neighborhoods because they came from the same country or because they are of the same color or religion. Sometimes these people do not have the freedom to choose where they can live.

People in these neighborhoods may not feel that they are part of the city. Sometimes they do not know where to go to tell someone about their needs. Often they do not have anybody who will listen to them. Because of this, they may have bad feelings toward the rest of the city. If these bad feelings last very long, the whole city suffers.





Cities today are trying to find ways to help neighborhoods live in peace with each other

1. In some cities, neighborhoods are planned so that good homes are built both for families with high incomes and for families with low incomes.

2. In many cities, old, run-down, and crowded apartment houses are being torn down. New apartment houses are built with enough room for each family.

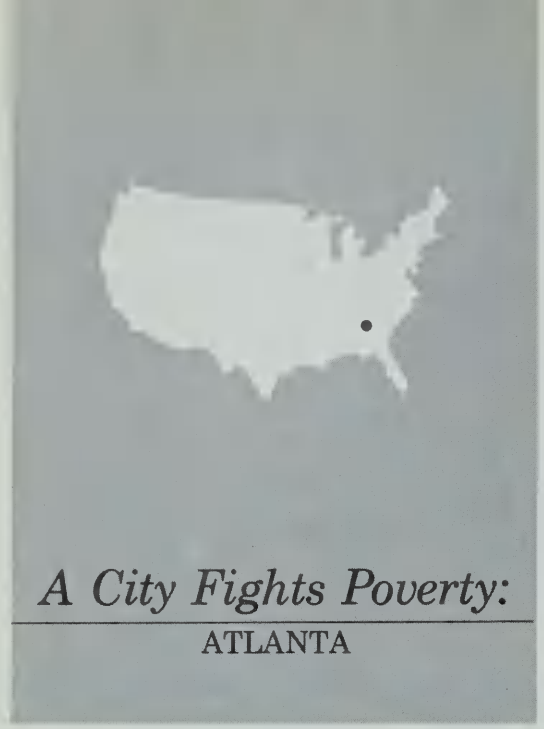
3. In many poor neighborhoods, city workers and volunteers help boys and girls get a better education. They help grownups learn new skills. Better education and skills help children and grownups get better jobs and earn higher incomes. The people who are helped feel that the rest of the city really cares about them.

4. Some cities have laws that say all people are free to choose to live in any neighborhood they can afford.

5. In some cities, the people of a neighborhood that has problems meet together. The leaders of the neighborhood meet leaders of the city to discuss what the neighborhood and the city can do to solve the problems.

In all cities, people have to find ways to settle their differences in a peaceful way. This work is not easy. People have to be patient with each other. People have to use their brains instead of their fists. They have to understand the reasons their ideas are different. They learn how to discuss and exchange their ideas. Such talks help people solve problems.

Common interests and settling differences peacefully keep people together in cities. Common interests and settling differences have been part of the life of cities from the beginning of cities. They will be part of the life of cities in the future.



A City Fights Poverty:

ATLANTA

Atlanta is a lively city. It is the capital of Georgia. It is an important transportation center. Important railroads, highways, and airlines come into this city.

Atlanta is also an important trading center. Goods come here from all over the country and from other parts of the world. The goods are sold to stores all over the southern part of our country.

Atlanta is an industrial center, too. Factories in Atlanta produce iron and steel goods, airplanes, automobiles, soft drinks, furniture, clothing, and chemicals.

Atlanta is a center for art and science. The city has many art galleries, theaters,

a fine orchestra, and many colleges and universities.

Atlanta is a city of hills and trees and curving streets. People come to Atlanta because they can live close to nature and still be part of a big city.

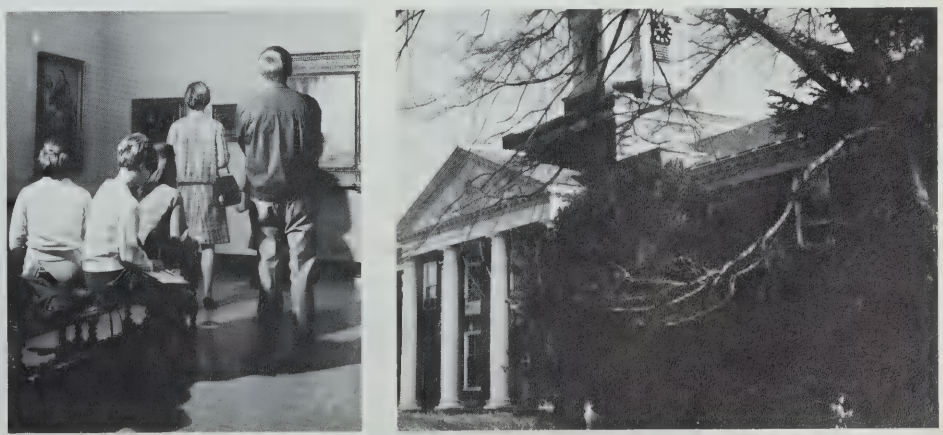
Scientists, artists, bankers, poets, salesmen, and actors have moved from other places and made Atlanta their new home. Many businessmen have moved there too. These people, together with families that have lived in Atlanta for many years, make the city a marketplace of ideas.

In the middle of Atlanta, as in most big cities, there are slums. Years ago wealthy families lived in great houses in this part of the city. Many of the people who owned the houses have moved to the suburbs. Now many poor families are crowded into these old houses. Sometimes five or six families live in a house where only one family lived before.

There are other neighborhoods where families live in small, run-down houses. The houses are cold in winter and hot in summer.

Many boys and girls who live in crowded slums have no place to do their homework. Some quit school. They do not get an education. This means they

Atlanta has many fine schools and colleges, businesses and factories, theaters and art galleries.



A poor neighborhood in Atlanta.

cannot get a good job. They will have to go on living in the slums.

The poor people who live in the slums live in *poverty*. This means that they have very little money or goods. People who live in poverty often have no way of making a good life for themselves.

Atlanta was the first city to join the War on Poverty. The War on Poverty is a new idea. The idea is: give poor people tools, and they can help themselves. The people who believe in this idea think that poor people can win their fight against poverty if they have the tools. The main "tools" are education, jobs, and health.

To see how the War on Poverty works, let's meet Mrs. Mayfield. Mrs. Mayfield is called a *neighborhood aide*. There are hundreds of neighborhood aides at work in Atlanta. Most aides are poor people who live in poor neighborhoods themselves. They go to school to learn how to help other people. Their job is to go from door to door and meet everyone in their neighborhood.

Neighborhood aides visit families in their neighborhood. They try to find out who needs help.

They ask many questions and look for people who need help. They tell these people how the War on Poverty can help them.

One day Mrs. Mayfield knocked on the door of an old house. She met a young woman named Mrs. Simpson. Mrs. Mayfield learned that Mrs. Simpson lived alone with her two small children. Mrs. Simpson had no job. Mrs. Simpson wanted to be a nurse, but she had not finished school. She could not get a good job. She had no money. She could not buy enough food for her children. Their rooms did not have electric lights. Their rooms were cold. Mrs. Simpson gathered scraps of wood and burned them in a small fireplace to keep her children warm.

"I can't get a job," said Mrs. Simpson. "I have to stay home with my children. There is no one to take care of them if I go to work."

"I think we can help you," said Mrs. Mayfield. "Do you want to go back to school?"

"Yes," said Mrs. Simpson. "I'd still like to become a nurse."

"Then you could go to school and keep your children in our Day Care Center," said Mrs. Mayfield. "The Day Care Center takes care of small children while their mothers work or go to school. The children have fun at the center. They paint. They play games. They eat good food."

Mrs. Simpson went back to school. Her children went to the Day Care Center every day. Mrs. Simpson is finishing her education. She is learning to become a practical nurse. Soon she will have a good job and her children will have a better home. She will not need to accept gifts from anybody to raise her children.

Another time, Mrs. Mayfield knocked on the door of a run-down apartment. Inside, she met Mr. and Mrs. Holt and their six children. Every day Mr. Holt looked for a job, but he could not find one. The Holts had no money. Their car had broken down. They had no furniture. They slept on the floor. They had no food. Three of their children were sick.

A practical nurse feeds a baby at a day-care center.

Mrs. Mayfield knew what must be done first. The children needed a doctor. She called some other neighborhood aides to help her. They borrowed a car. They took Mrs. Holt and her children to a hospital.

Another neighborhood aide found a store where some beds and furniture cost only $25. Mr. Holt went to the store. "You do not have to pay us now," said the store manager. "You may wait until you find a job."

The War on Poverty has specialists who find jobs for other people. Mrs. Mayfield took Mr. Holt to these people. Soon they found a job for Mr. Holt at the Meadows Manufacturing Company. The company trained Mr. Holt to run a machine. Now Mr. Holt has a regular job. He can take care of his family. His children will have enough shoes and clothes to go to school.

"Some of your younger children are not ready for school," Mrs. Mayfield said to Mr. Holt. "Would you like them to go to a Head Start school?" Mrs. Mayfield explained that the War on Poverty has schools where some poor children get ready for regular school. The schools give the children a "head start." They learn to draw and paint. They meet policemen, doctors, nurses, mailmen, and other people. They talk to grownups; grownups listen to them. They play games together. They visit the zoo. They visit a farm and see cows give milk. They learn about things they will study in school. They listen to stories from books.

Children paint pictures in a Head Start school.

Head Start children go to the zoo to see the animals.

The Head Start school sounded like a fine idea to Mr. Holt. Now all the Holt children are learning things they did not know before.

Because of better jobs and income, some families can fix up their houses. A few families can even look for better homes in other neighborhoods.

But new families move into the slums every day. People come to Atlanta from small towns and farms. They are not needed on the farms. They come to

Every day, families come to Atlanta to find homes.

Atlanta to find jobs. They have little money.

It is hard for poor people when they move to a city. They seldom have friends to help them. They need a place to stay. They need to eat. Eating in a restaurant costs too much. They need a place to cook their own food. They do not know where to find a home. Some families sleep in their cars night after night because they cannot find rooms.

It is hard to find work, too. Jobs in the city are different from jobs on a farm. Newcomers do not know where to look for jobs. Some cannot read. Some are frightened by the traffic and the strange streets. Some become lost. They do not know who can help them. Many of them do not know about the War on Poverty. Neighborhood aides find some of these people. Sometimes aides just happen to hear about them. Let's see how it may happen.

Mrs. Foote is a neighborhood worker. She was walking near the Georgia state capitol, a huge building with a golden dome on top. Mrs. Foote saw a small boy selling newspapers.

"What is your name?" asked Mrs. Foote.

"My name is Ronald Duffey," said the boy.

"Why aren't you going to school?" asked Mrs. Foote.

"Because my father is looking for a job, and we need money," said Ronald.

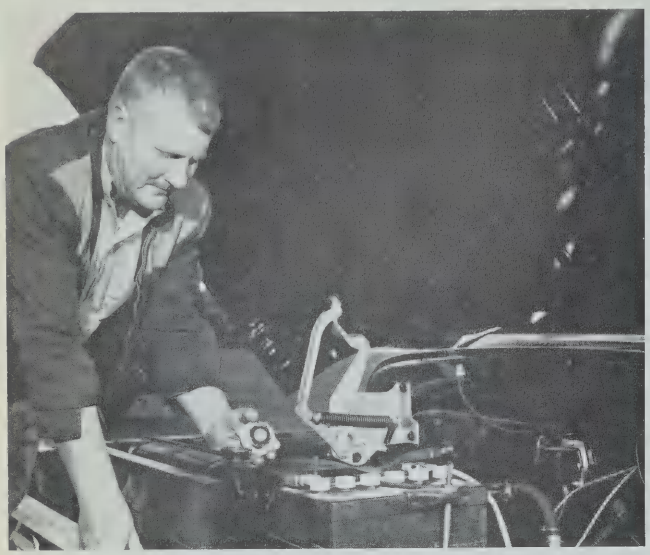
Mrs. Foote asked to meet Ronald's parents. When she did, she told Mr. Duffey about the War on Poverty. She took him to see Mr. Thompson, one of the job specialists at the Neighborhood Service Center. Mr. Duffey told Mr. Thompson how he had moved to Atlanta with his wife and seven children. Mr. Duffey had worked on a cotton plantation most of his life. He lost his job when the farmer began to use machines.

Mr. Duffey had found several jobs in Atlanta. None paid enough to take care of his large family. He did not know how he could get a better job.

"I only went through the sixth grade," said Mr. Duffey. "For two months every fall we had to pick cotton. Two months every spring we planted. I had only a half-term every school year."

"There are schools in our city that train people for jobs," said Mr. Thompson. "Men can learn to be mechanics, carpenters, landscapers, painters, janitors, and many other kinds of work."

"I would like to go to school," said Mr. Duffey. "But if I am in school, I



Mr. Duffey checks a truck's engine. He has been trained to drive a truck and keep it running.

One of Mr. Duffey's sons works at the zoo. He enjoys feeding the elephants.

will not have time to work. Then I will not have money for my family."

Mr. Thompson told him that the War on Poverty would give him money while he goes to school. The money would be enough to feed and shelter his family.

Mr. Duffey was pleased. "I would like to become a mechanic's helper," he said.

Mr. Duffey went to school for eight months. He had a good teacher. "If anybody wanted to learn, that man could teach 'em," said Mr. Duffey. Mr. Duffey finished school. Soon he found a job. Now he drives a truck and does the mechanical repairs to keep the truck running smoothly.

Two of Mr. Duffey's sons also found jobs through the War on Poverty. Billy works as a laborer. Robert works at the zoo, where he feeds the monkeys and cleans the elephant cages. But Mr. Duffey is worried about Billy and Robert. He knows they should go back to school. If they do not, they will have trouble earning enough money when they have their own families to support.

It takes a lot of money to feed a large family. The Duffeys must choose carefully the things they will buy. They have few clothes. They cannot afford to take a drive on Sunday. "We hardly leave this house," says Mr. Duffey.

The War on Poverty is a huge project. The United States government provides the money from taxes paid by all the people. Each city runs its own program because each city is different. Atlanta's leaders know the program offers a chance for poor people to get education and training. This helps people get jobs. They do not have to depend on gifts.

There are many stories of poverty in a big city. These are just a few examples. Not all the stories are as simple as the

stories you have just read. If a father or mother is in bad health, it is hard for them to learn a skill or to keep a new job. If people have not been to school for a long time, it is hard for them to go back to school. If a man learns how to do a job, he still has to compete with other people for the same job. The fight against poverty is not an easy fight.

The War on Poverty cannot work well without the help of many people. In Atlanta, poor people help other poor people. Many neighborhoods in Atlanta help the poor neighborhoods. Atlanta's government leaders, business leaders, church leaders, owners of newspapers, specialists at the universities, and many others help.

Now you can see why the War on Poverty is working so well in Atlanta.

People Who Put Ideas to Work in Atlanta

The Reverend Martin Luther King, Sr.

Newspaper publisher Ralph McGill

Neighborhood aide Annie Sue Bogan

Mayor Ivan Allen

A New Life in the City

Darkness settled over the quiet Kentucky valley. Here and there, lights went on in the small mining town nestled between the hills. In one cabin just off a dirt road, the Lovell family sat down to supper.

Johnny Dell, the oldest boy, looked up at his mother. "Cornbread and gravy again?" he asked.

Mr. Lovell frowned. "Yes it is. And we're lucky to have it."

Laura Jane, who was almost as old as Johnny Dell, gave him a "be quiet" look. Mrs. Lovell filled plates for the little ones, Corey and Billy Bob. Lee, the youngest Lovell, slept nearby in his cradle.

It seemed there was always cornbread and gravy for supper, mush and milk for breakfast. Mr. Lovell was a coal miner and he was out of work. Most of the men in the valley were out-of-work miners. They had gone to work in the mines when they were just boys. Mr. Lovell's strong arms and shoulders had come from years of working with a pick and shovel. With his strength and these tools, he had always earned enough money. He could buy the simple things his family needed. There was enough for a quiet life in the valley the people of his family had loved for two hundred years.

But now the mining was done by new machines. The mines no longer needed armies of men to dig and shovel coal. And there were no other places in the valley for the miners to work.

Days and weeks went by. The jobless men could no longer go to the company store and charge their food. Most of them soon used up any money they had saved.

The federal government began sending free food for the families with no money left. The Lovells still had a little of their savings, so they did not have to use the federal food. But they saw neighbors standing in long lines for powdered milk and cornmeal to feed their hungry families.

The Lovells were hungry too. They had been eating as little as possible ever since Mr. Lovell had lost his job. Mr. Lovell was worried as he watched his

children clean their plates.

"I've been thinking," he said. "Remember when this same thing happened in Leeville last year? Cousin John Winfield moved up North and got a city job—"

Johnny Dell was excited. "Are we going, Pa? Jess Smith says his folks are going to Detroit just as soon's they scrape up some traveling money."

"Not Detroit, Son," his father answered. "Cousin John wrote and said he'll be happy to put us up awhile if we can get to Chicago. I hate to leave home, but till things get better here, I don't know what else we can do."

A few days later, the Lovells said goodbye to all their friends and relatives. Laura Jane hugged her best friend. "We'll be back soon as Pa makes enough money," Laura Jane told her. Then Mr. Lovell steered their old blue car onto the dirt road leading out of the valley.

The Lovells drove all day and all night, stopping only for gasoline. They had just enough money for that. At mealtimes Mrs. Lovell gave every one cornbread and water from a basket she had packed. The children slept sitting up in the moving car.

All the children but Laura Jane were asleep when the car reached Chicago in the morning. She could hardly believe her eyes. The city was all hard and gray. Tall gray buildings towered over the wet gray streets. Even the people hurrying along in the morning fog looked gray.

Laura Jane shivered. She thought sadly of the lovely green mountain laurel, the deep blue streams, and the misty mountains of home.

The Lovells had a hard time finding their cousin's house. In the valley anyone could have told them where someone's house was. But here in the city no one knew John Winfield. Finally Mr. Lovell asked a policeman how to get to the address on the letter.

The Lovells were tired and hungry by the time they got to the right place. They stood in front of the big, dirty, run-down building that looked like all the other big, dirty run-down buildings on the street. Papers and empty bottles littered the sidewalks. Most of the old cars parked along the curb had license plates marked Kentucky, Tennessee, or West Virginia.

The front door opened and John Winfield came out. "I've been watching for you," he said with a smile. "I'm mighty glad to see you all. Come on in."

The Lovells were glad to see someone they knew. They followed their cousin

up some stairs—and more stairs—and still more stairs—until they got to his apartment.

Laura Jane was surprised to find just three tiny rooms. The Winfields had five children. There would be twelve people living in the apartment. But Mrs. Winfield didn't look unhappy about sharing her home with the seven Lovells. "When we first came to Chicago," she said, "kinfolks did the same for us. We'll put some blankets down on the floors and push chairs together for the small ones to sleep on. We'll manage just fine."

The next day Mr. Lovell went to apply for a job at the factory where John Winfield packed shoes into boxes.

"Sorry, we can't use you," the manager said. "Right now we need men who can operate machines. But we'll let you know when there's an opening to pack boxes or move crates in the warehouse."

The same thing happened at the other factories. They were all looking for trained factory workers. Mr. Lovell was only trained to mine coal.

Mr. Lovell needed money badly. On his third day of job hunting, he saw a sign in a window:

DAYLABOR, INC.
Men Wanted—$1.25 an Hour

He went in and was told he could go to work right away. He and ten other men went to a railroad yard, where they loaded freight all day. The work was hard, but Mr. Lovell went home with some money in his pocket.

After that he went to Daylabor, Inc., every morning. Usually he was sent to a warehouse or freight yard. But sometimes the man at the office told him there was nothing for him.

It wasn't steady work and Mr. Lovell soon learned that $1.25 an hour didn't buy much food at city grocery stores. But until he could find steady work, he had no choice. He had to be a day laborer.

The Lovells used some of the day work money to move into their own tiny apartment. It was in an old gray building not far from the Winfields' home. Paint was peeling off the walls and the halls smelled of garbage.

All day long, Corey and Billy Bob begged to go out and play. But Mrs. Lovell was afraid to let her children go down into the noisy streets. Johnny Dell could go to visit the Winfield boys, but Laura Jane had to stay in. Mrs. Lovell wanted her to help look after the younger children.

In the afternoons while the children slept, Laura Jane sat at the window. She

stared down at the cars and trucks creeping along the dirty gray street below. The city looked sad to her—even the sun seemed gray in the hazy sky. Tears filled Laura Jane's eyes. She hated this new life in the city.

By the end of their first year in Chicago, many things had changed for the Lovell family. Mr. Lovell had a steady job at a gas station. He was earning $2 an hour. The family lived in the same small apartment, but it was a little brighter now. There was a new television set. Mrs. Lovell had made bright flowered curtains. Mr. Lovell had painted the table and chairs bright yellow.

Laura Jane and Johnny Dell went to the neighborhood school. After school they often went to a youth center with their new friends. At the center the boys played ball or swam and the girls put on plays or took sewing lessons.

But the Lovells still thought of the valley. In the spring they were so homesick they drove back for a visit.

The air was sweet with wild spring flowers. The hills were covered with bright green grass and flowering trees. It was good to be home.

But Laura Jane found that none of her old friends were there. Most of the cabins were empty. Mr. Lovell sat and talked with a lonely old man who had stayed. The old man spoke sadly of all the young men who had given up hope. "No way for a man with kids to stay here. There's never going to be work for a man in this valley."

Laura Jane stood looking at their old cabin. She felt very sure that she would not see it again. She cut a small branch of blossoms from the tree that grew next to the porch.

"I'm going to take this back to the city. It will help a little."

The City and Government

LESSON 7

All of us have many wants. A baby wants care. This and many other wants are usually looked after by families. Other wants are filled by the many different goods and services produced by businesses. Some wants are filled by volunteers. Someone may want help in crossing the street and you may fill this want by volunteering to help.

There are some wants that we ask government to fill. These are wants that we think we could not fill as well by ourselves. To fill these wants, government must make decisions. These decisions take the form of rules or laws that we all must obey. Many of these rules and laws permit the government to produce certain goods and services. We believe these laws should (1) make life safe and orderly, (2) make things fair for everyone, and (3) help provide for our happiness and well-being.

"The Results of Good Government." Painted in 1337, it shows the happy, peaceful life people should have when their government provides well for order, fairness, and happiness.

When you stop for a red light, you are obeying a government rule. This rule makes both driving and walking across the street safer. Such rules help to make life safe and orderly.

There are government rules that say that workers must be hired according to what they can do, not according to what color they are or what church they go to. Such rules help to make things fair for everyone.

Government rules provide for schools that are open to all. People are better off because of what they can learn at these schools. Such rules help provide for our happiness and well-being.

These are just some of the things government does. Today most governments provide a great many other goods and services. The streets we ride on, the fire department that protects our homes, the sewers that carry wastes away are all goods or services produced by government. There are many more.

Who runs the government?
How are those who run it chosen?

The answers to these questions are different for different countries and for different times. In the United States the people have a say about who runs their government. We call this *democracy*. But we cannot all talk about and vote on everything the government does. So we choose a number of men and women to make decisions for us. We *elect* them. We expect that those who are elected will *represent* us. This form of government is called *representative democracy*.

You probably know that the United States has a President and a Congress. They are part of the United States government. The men and women in Congress make laws. The President does not make laws, but he helps Congress to make them. If he feels there are needs, he may ask Congress to do something about them. Congress may pass a law.

The President and the many government departments with their specialists carry out or *enforce* the laws.

But in our country there are other governments besides that of the United States. Each state has a government. California has a government. Maine has a government. Each of the other states has a government. These governments make laws and produce goods and services for their own states.

Within each state there are more governments. There are county governments and city governments. There are even some specialized governments that are set up to handle one special problem. In most cities, for example, the schools are run by a specialized government.

All these city, county, and specialized governments get the right to be governments from the state. The state government puts down in writing what these governments can and cannot do. This is often called a *charter*.

Many city governments have a mayor. The mayor of a city is something like the President. He is usually elected by the people of the city. If he feels there are needs, he may ask the city lawmakers to do something about them. Then the lawmakers may pass a law. The mayor and city departments carry out or enforce the laws.

The men and women who make the laws for the city are like congressmen. In some cities they are elected from the city's different neighborhoods. This way the people of the neighborhood can elect a person who will look after the needs of their neighborhood. In other cities lawmakers are elected from the city as a whole. These lawmakers usually think more about the whole city than about separate neighborhoods.

The people who are elected to run our city governments hire specialists to do the day-to-day work of the government. In many cities a *city manager* is hired to run the government's everyday work. He carries out the decisions made by those who are elected. That way the people of the city have a voice in the government through the persons they elect.

How does the government decide what rules and laws to make?

How do those who are elected know what people want? How do those who are elected decide which wants the government will fulfill?

The answers to these questions are not simple. All of us have wants. Sometimes there may be only one person in the city who wants the government to do a certain thing. But often there are many people who want the same things. For example, most parents want better schools for their children.

There are many such groups in the city. The people of a neighborhood may want better street lights there. A group of businessmen may want better transportation and parking close to their stores. A group of workers may want laws that will make their work safer.

When a group of people discover that they want the same thing, they may *demand* that the city government do something about it. They may organize to get their demands heard. The people who want services for their neighborhood may form a community organization. The businessmen may form a trade association. The workers may tell about their demands through a labor union.

They all try to get the city government to listen to their demands. They may speak to the mayor and the city's lawmakers. They may buy ads in newspapers or make statements to the public. They may even march on the streets, carrying signs telling other people what they want.

Newspapers, radio, and TV carry news about the things that different groups are demanding. More people learn about the demands and talk them over.

Today, people demand more

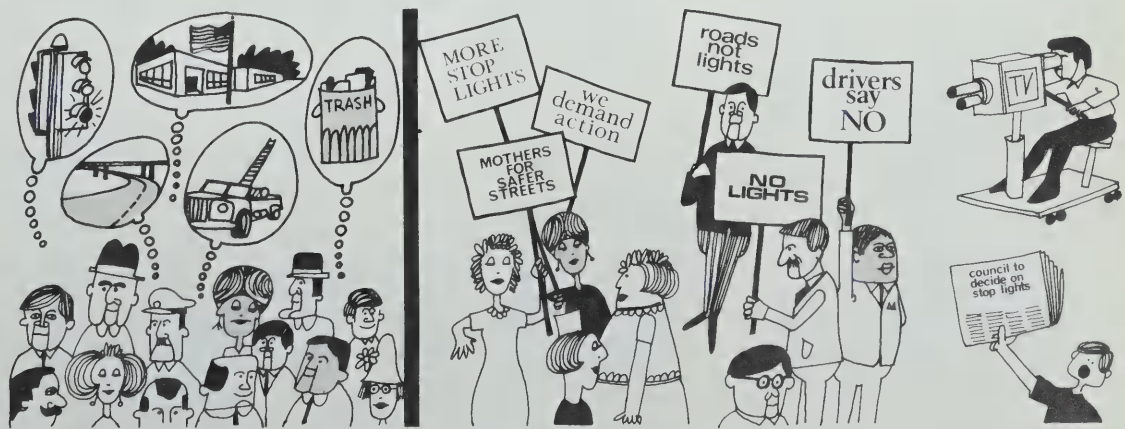
People are demanding more from their city governments than ever before. New laws to keep teen-agers out of trouble, public transportation, and help in rebuilding old neighborhoods are just a few of the new demands. Thousands of specialists from city governments and from the United States government are studying city problems. They are trying to find better ways to solve these problems.

Why must city governments do so much more now than in the past? One reason is that cities have grown so large. The more a city and its suburbs spread, the bigger the transportation problem becomes. More people and more different kinds of people result in more problems in keeping the city an orderly place. The city may need more policemen to keep law and order. New businesses may need better services. Growth is good, but it means work for the government.

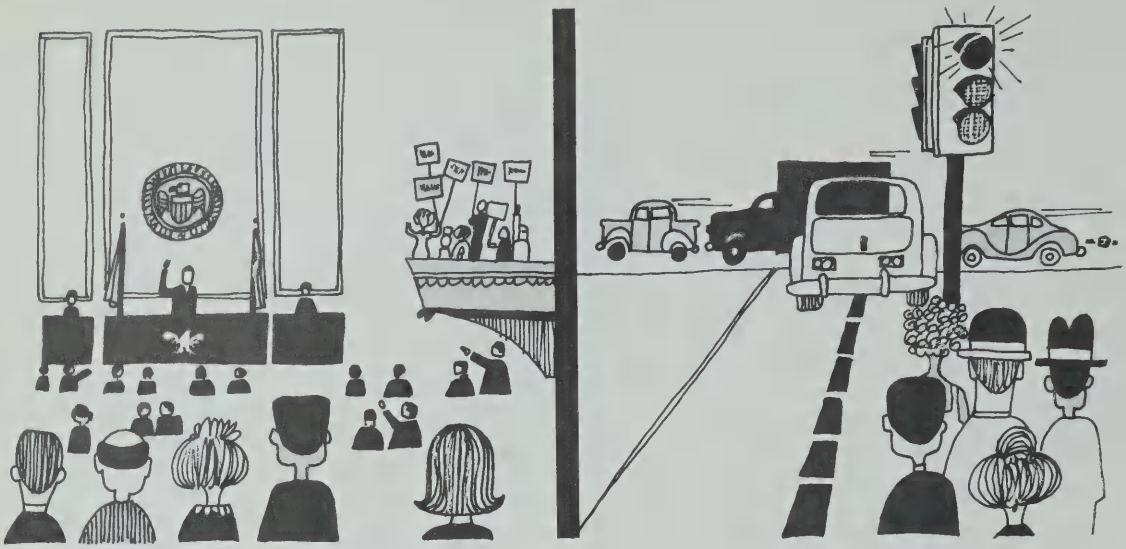
Another reason city government is being asked to do more is that more people are demanding things. Many people knew for a long time that cities should do something to get rid of slums. But more is being done now because the people in the slums are forming groups. They are demanding action.

Still another reason for more demands today is that people are better off than they used to be. This sounds strange but the better off people are, the more they expect from the government. For example, more people today can buy cars. So they demand more roads.

Because people have more demands, city governments need more money. The city's people and businesses pay many different taxes. There are taxes on houses, stores, and factories that the owners must pay. Many cities have sales taxes that people must pay when they buy things. To save tax money for other uses, cities often charge a price for some goods or services such as water.



People have many wants they think government should fulfill.
People who are for or against an idea may form groups.



If the demand is strong enough, it will be discussed and decided on by the lawmakers.

If a law is passed to meet the demand, it is expected that everyone will obey the law.

Cities also get help from their states and from the United States government. This money usually comes from taxes that city people pay to the state and United States governments.

Demands sometimes lead to conflicts

With so many demands being made and so much money needed to fill them, people have many different ideas about what the city government should do.

In our democracy people have the right to speak up when they do not agree with others. They have the right to join with those who agree with them. This way they can make stronger demands for laws to carry out their ideas. But differences of opinion can lead to conflicts between people.

Some of these conflicts are between people inside the city. There are conflicts between people with higher and lower incomes. They may want very different kinds of services from the city. There are conflicts between people living in different neighborhoods, and between people who think of the whole city first and those who put their neighborhood or group first.

But once government decides on a law, it is expected that everyone will obey it.

There are also conflicts between city people and those who live outside the city. The city people may think that they give up too much land for expressways that are used by people from the suburbs. People in the suburbs and on farms may think that the states and the United States government spend too much tax money to help cities.

With so many demands and conflicts, the city government cannot do

everything that everyone wants. It is often very hard to make decisions.

People must work hard to govern themselves

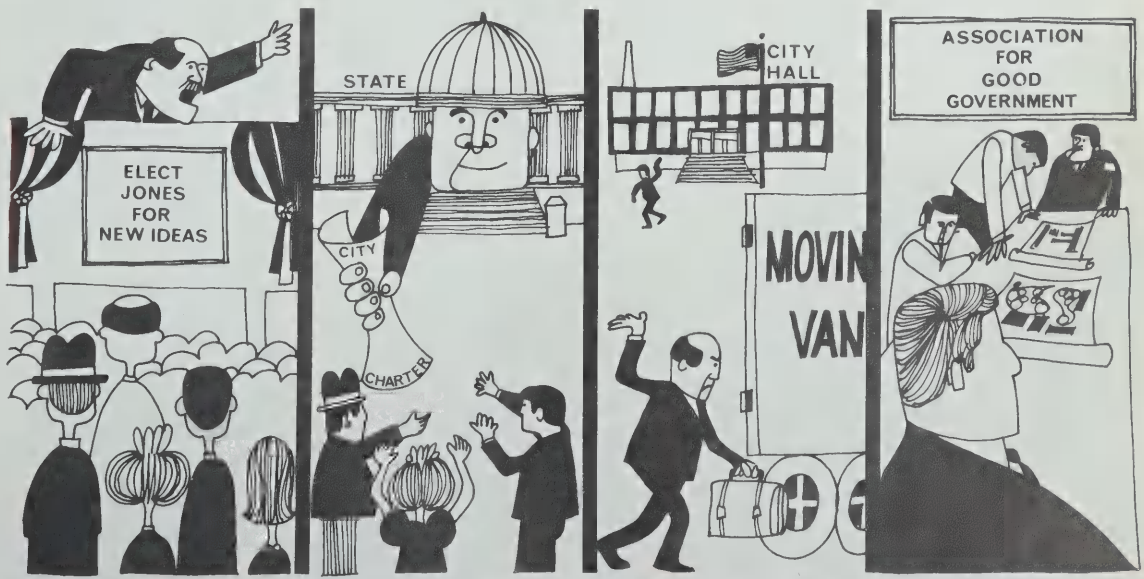
If most people think that the city government has done a good job, they may elect the same persons to represent them again. If people think that their leaders have not done so well, they may elect others.

People who think that a certain person will fill their wants usually work together to elect him. Often they join the same political party to work on the election.

Sometimes the city government cannot do a good job because the state has not given it enough power to do what the people want. They may have to ask the state to change the charter for the city government.

Sometimes people think that the government is not filling their wants. And they think that they cannot do much about it. Sometimes they say, "What's the use?" Some people may move away from the city. Others may just give up trying to do anything about their government.

In the United States we do not have to put up with bad government. We can change it. But to do this, we must work hard all the time, not just at elections. We must let our city leaders know what we want. We must keep after them to see that they get things done. People can have their say about how they want their city, state, and country run if they take an active part in their government. They must work at it all the time.



People work together to elect those persons they think will fulfill their wants. People may ask the state to change the city charter to fulfill their wants better. Some people give up hope of better government. People must work all the time to get the government to listen to their wants.

Getting Together for Good Government:

GREATER MIAMI

Each winter thousands of tourists go to Miami, Florida, to get away from the snow and cold of the north. The people who live in Miami all year call the tourists "snowbirds."

The snowbirds swim and water-ski in the ocean. They lie on the beach and soak up the sunshine.

The people who live in Miami are glad that the tourists come. Tourists mean jobs. Cooks, waiters, maids, clerks, bellboys, and many others work in the hotels where the tourists stay and in the restaurants where they eat. The tourists want to see the sights, so there are jobs for taxi drivers and boatowners. Even the tourists' shirts mean jobs for laundry workers.

Many people go to Miami Beach for vacations. They stay at pleasant hotels like these along the ocean.

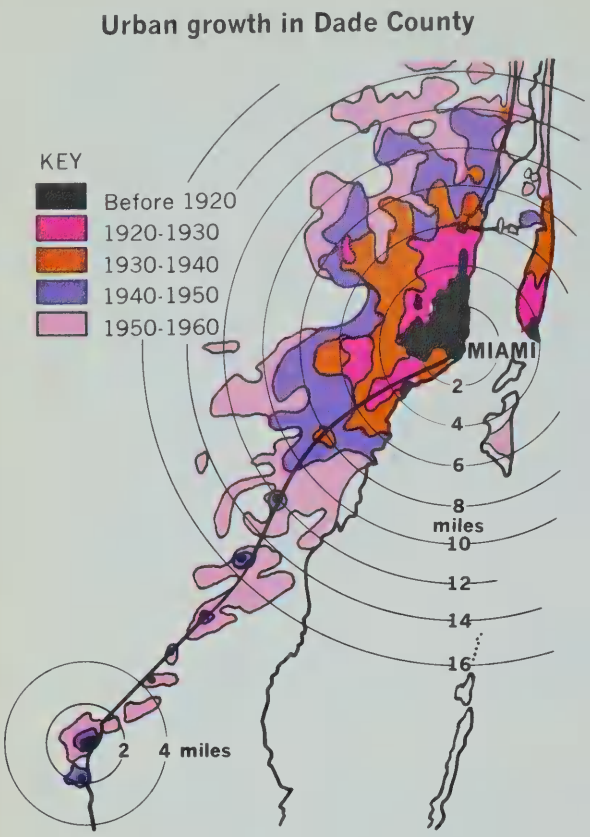
Just seventy years ago, the city of Miami had only 5000 people. Most of the surrounding countryside was swampland where only a few Indians lived. Today over a million people live in the cities, towns, and countryside that make up Greater Miami.

At first the newcomers settled close to Miami. Soon the land near the water was used up. People began moving farther from the city. Twenty-six cities and towns grew up around Miami. People began settling in the spaces between the cities and towns, too. The cities, towns, and all the land between are now called Greater Miami.

The city of Miami Beach is an example of how fast the cities have grown. About sixty years ago it was just a swampy island. Then some men decided it would be a good place to build a city where people could relax and have fun.

"What?" others laughed. "That island is nothing but a swamp with lots of bugs and snakes and alligators."

But the men went ahead with their ideas. They filled in the swamp. They paid for ads in the newspapers of big Northern cities. In the ads they said there was good land for sale where there was sunny weather and a long ocean beach. People came from all over. They liked what they saw. Today Miami Beach has hotels and apartments for 120,000 tourists. More than 60,000 people live there all year round. It is one of the richest, busiest cities in the whole of Greater Miami.



This map shows how much Miami has grown since 1920.

With so many new families moving to Greater Miami, the whole area was coming to be more and more like one giant city. And it was collecting more and more of the problems of a giant, fast-growing city. But Greater Miami did not have just one city government. Each of the twenty-seven cities and towns had its own government. The people who lived in between the cities and towns were governed by Dade County. The area of the county took in all the cities and towns and a lot of surrounding countryside.

Each of the twenty-seven city and town governments and the one county government made its own laws. Each collected its own taxes. Each did things its own way. Because the governments did not work together, there were many problems.

Many people in Greater Miami lived far from their jobs. Often they had to drive through several cities to get to work. The speed limit was different in each city. Within six miles along one main road there were six different limits. It was hard to know just what the speed limit was. Even good drivers were stopped and fined for going faster than the speed limit.

People who rode buses to work also had problems. For example, a big highway runs from the town of Coral Gables right to the airport a few miles away. But the bus trip from Coral Gables to the airport took a full hour. Bus riders had to transfer between two bus lines and pay two fares.

Even tourists were caught in the mess. Taxis going from the airport to Miami Beach went through crowded city streets. They had to stop for many red lights. It often took the tourists over an hour just to get to their hotels.

The tourists came to find fresh air and sunlight. But sometimes they found smog. Smoke mixed with dampness in the air and formed big clouds of smog. The smoke came from cars and trucks and from burning trash. The worst smoke came from fires in the swamps

west of Miami. Some towns took their trash there to burn. Just under the surface of the swamp there is a material called peat that is something like coal. The peat caught fire and burned for a long time. Smoke from the burning trash and peat covered the whole area.

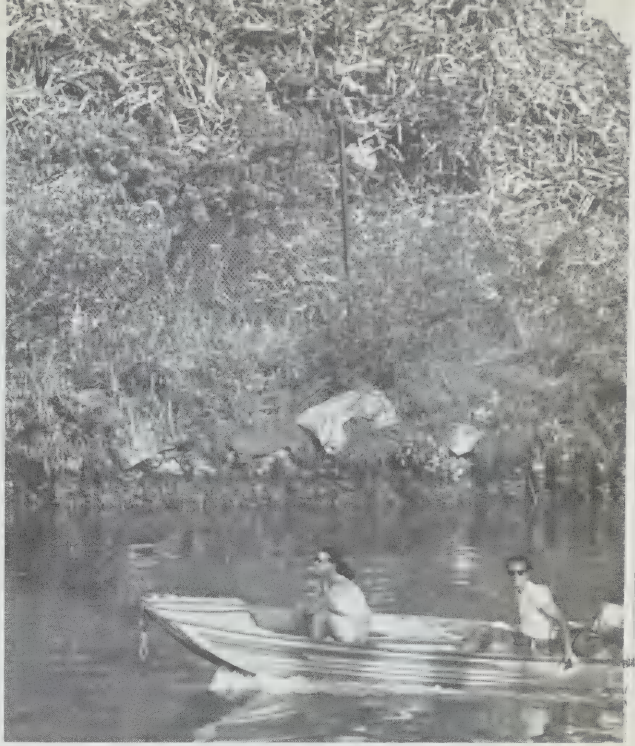
People were afraid it would keep the tourists away. But what could any one city do? Even if it kept its own air clean, the wind would blow smoke from nearby cities and swamps.

Dirty water was another problem. Once the bay and river by Miami had been clean and clear. Now many cities were pouring wastes into the bay. The river was lined with junk. Streams were being dirtied. But again, what could just one city do?

Greater Miami was growing without any overall planning. New buildings were going up everywhere. But each city and town had its own zoning rules. One city might have nice houses on the edge of town. What would keep the city next door from allowing factories to be built right across the street?

Then there was the problem of services for all the people who lived outside the cities and towns. They needed running water, garbage collection, and fire protection. The county government tried to do most of the job. But nearby cities often had to help with services too.

The city people did not like this. They paid taxes both to their city and to the county. They did not think it was fair that those who lived outside the cities



Junk once cluttered the riverbank near Miami.

Piles of trash made some Miami streets look ugly.

got services from the cities without paying for them.

Not all of the cities and towns could produce good services. Some cities had good schools. Others had poor schools. Some had large police forces. Others had small ones. Some had good fire departments. Others had none at all.

Many people thought this was wrong. They said, "Everyone should have good schools and police and fire departments. It does not matter whether they live in a big city, in a small town, or outside."

The people of Greater Miami began to work together in some ways. The county government set up a health department for the whole area. In this way people could be sure that the state health rules were carried out in all of the cities, towns, and countryside of Greater Miami.

To have good hospitals for everyone, the Dade County government took over the City of Miami hospitals.

So that all the children of Greater Miami could be sure to have good schools, all the schools were put under a county school board.

But Greater Miami kept on growing, and the problems kept on getting bigger. Some people began to say, "We need a stronger county government that can get more things done for the whole area."

"No," said others, "we don't want the county to tell us what to do!"

The argument grew hotter. A number of different ideas for a stronger county were voted on. Each time there were more noes than yeses.

The people who wanted a strong county government did not give up. They worked together on a new plan. They called it Metro. Metro would be a a new and much stronger county government. It would run many services for all Greater Miami. It would do the overall planning and make many of the laws for the area. The cities and towns would still have their own governments, but they would have to give up some of their power to the Metro government.

First the state of Florida had to give permission for a change in the county government. Then the people of Dade County had to vote on whether they wanted the new Metro government.

Many groups worked for the idea.

"Better services will be good for business," said many businessmen.

Many Miami people said, "Our city pays for services that everyone uses. Metro should do the job."

Some newspapers liked the idea and printed stories about it. The newspapers asked people to vote for it.

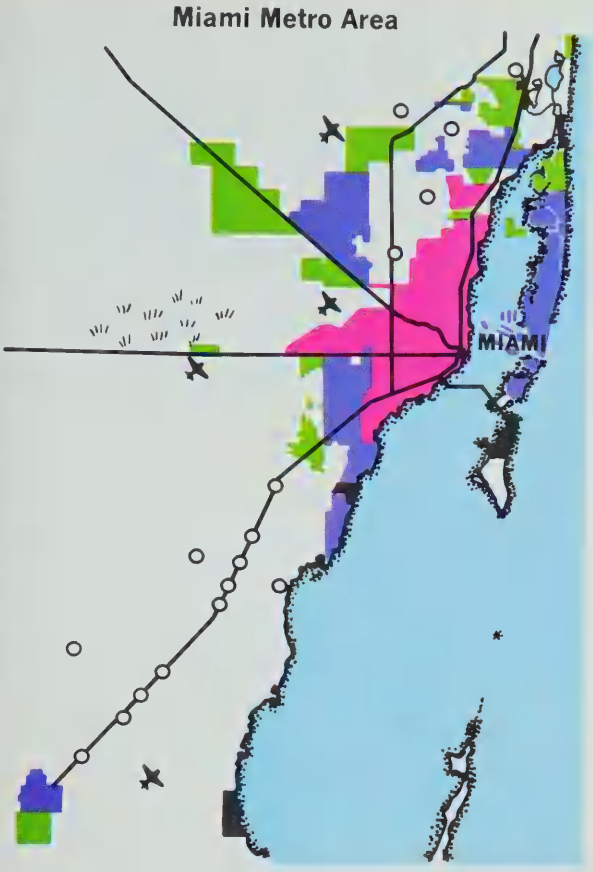
There were other groups who were against Metro.

"We will pay more than our fair share of taxes," said people from rich cities like Miami Beach.

"Metro will gobble us up," said some people from small towns.

Voting day finally came. The race was very close. But Metro won.

Under Metro the people elect men



Metro includes many communities. Good roads connect the smaller towns and cities to each other and to Miami.

called county commissioners who make laws and decisions for all of Greater Miami. The commissioners hire a man called the Metro manager. The manager carries out the rules and laws that the commissioners make. He hires many other specialists to help him run the day-to-day business of the Metro government.

An important part of the manager's job is to tell the commissioners about ways in which Greater Miami can be made a better place to live. He tells them about the wants and the needs of the people. The commissioners meet twice a month to decide which wants should be taken care of.

The Metro manager must deal with many problems. He gives advice to the commissioners on all kinds of questions. Should Metro build a new elephant house for its zoo? Should Metro help pay for a beauty contest? Which ambulance service should Metro hire for its hospitals?

The manager must go to many meetings with other government specialists. He meets with men from the state government to find out how the state can help Greater Miami. He meets with men from the United States government to get help for building new roads and airports, for cleaning up the air, and for rebuilding run-down neighborhoods.

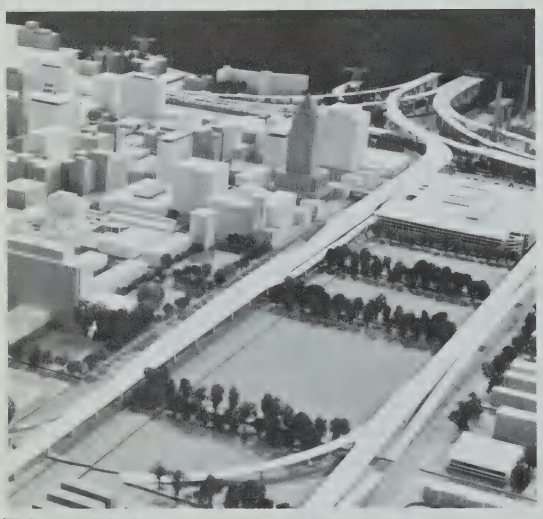
Because of its size, Metro can run its business well. It has money to hire good workers. It can buy modern machines. Metro can also save money because it can buy large amounts of supplies for the whole area. And it can cut costs and wastes by careful planning.

The port of Miami used to be behind the times and run-down. The city of Miami did not have enough money to fix it. So Miami turned the job over to the county. Metro is building a brand-new port where more ships can dock.

Metro planned the expressway that

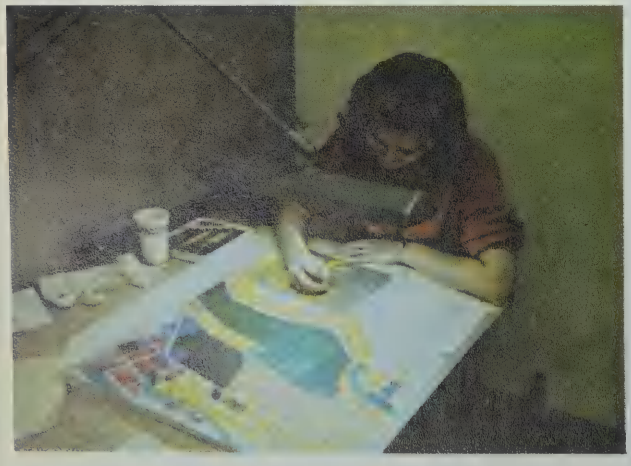
An expressway connects the airport and Miami Beach.

Modern equipment helps Metro police do their work.



This model shows part of the plan for Greater Miami.

City planners use the services of specialists.



runs between the airport and Miami Beach. Now tourists can get to their hotels quickly. Many Miami people use the expressway to get to work faster.

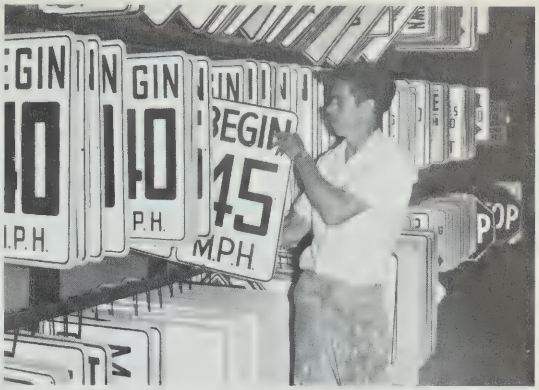
Under Metro, traffic rules are the same for the whole county. Speed limits and traffic lights are planned so that cars can move quickly and safely.

Bus riders have an easier time, too. Metro bought a number of the private bus lines and made them into one big company. Now the bus routes are better. People do not have to pay extra fares or transfer so often.

Metro is working away at many of the big problems of the area. Metro is planning for the growth of Greater

City planners discuss new ideas for Greater Miami.

Metro provides new street lights for its citizens.



These signs will remind drivers of traffic rules.

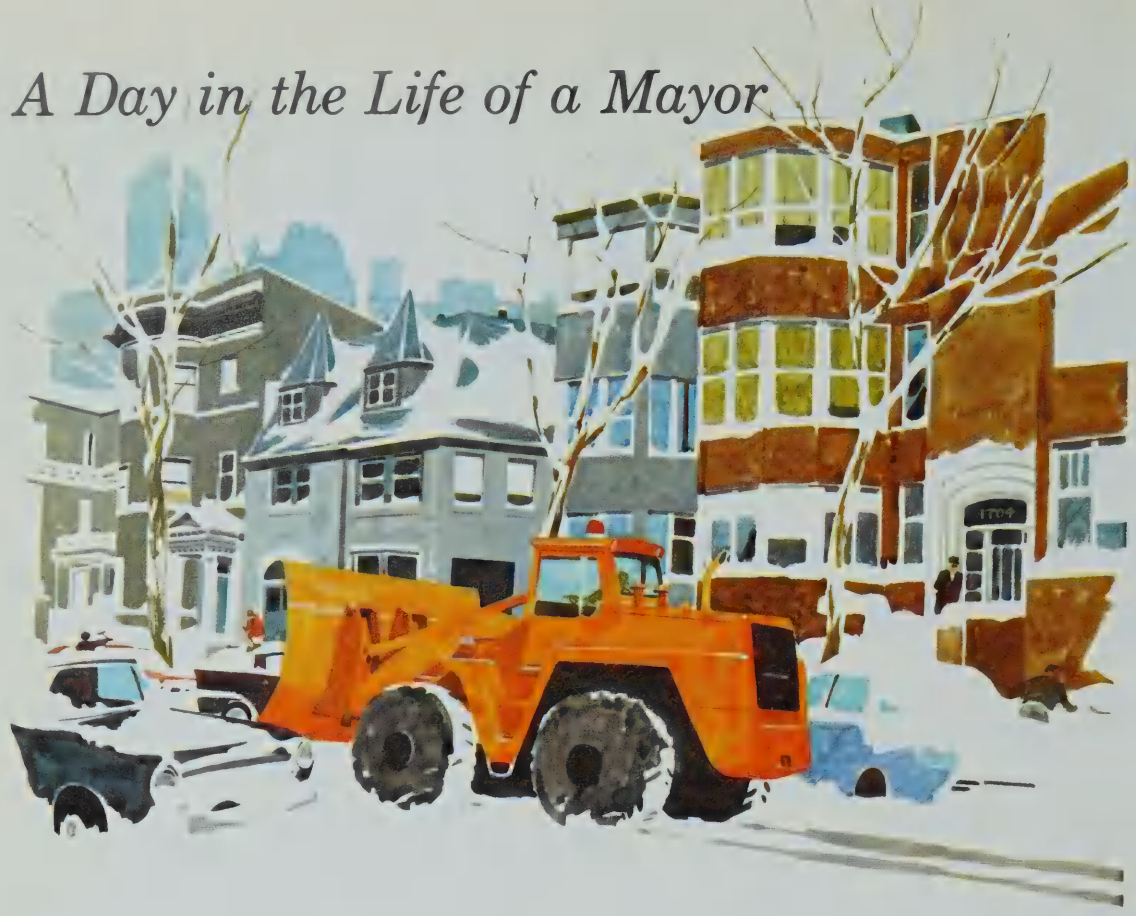
Miami. Where should new highways be built? How much land should there be for parks? Where should factories be allowed? What kinds of new businesses should Metro invite to come to Greater Miami? Should Greater Miami be mostly a vacation place for snowbirds? These are some of the questions Metro planners must answer.

Today many people who voted against Metro say that it is doing a good job for Greater Miami.

Many problems still face Metro and the people of Greater Miami. Metro is a new idea in America. Will it continue to work well for Greater Miami? How can it be made better? Should the city governments give up still more power to Metro? Should the state government give it more tax money?

Other cities are watching Greater Miami's Metro government. They are wondering whether Metro would work for them.

A Day in the Life of a Mayor



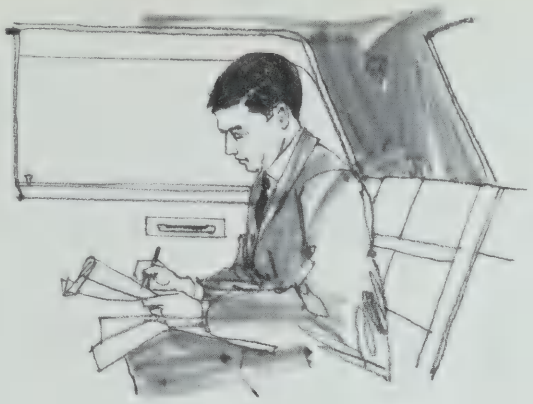
The alarm clock buzzed. The mayor of Detroit reached out to stop the noise. It was 7:30 on a January morning. The sound of children getting breakfast told the mayor that the rest of the house was awake. He looked out the window. During the night snow had fallen on the city of more than one and a half million people.

All across Detroit working men and women looked out at the four inches of snow that covered the ground. They wondered if they would be late for work.

For the city's Department of Public Works, the workday had started the evening before, when the snow began to fall. By 9 P.M. about 200 men had gathered at the department yards. They put snowplows on the front of big trucks. Other trucks were loaded with salt. All during the night men and trucks plowed through the snow and spread salt on the streets. By morning they had cleared 680 miles of main streets. They had sprinkled a total of 4000 tons of salt on the city streets.

The mayor had not needed to give any orders to the Department of Public Works the night before. He knew that the department would get the job done quickly and carefully.

The mayor had his usual breakfast, a glass of orange juice, and left for his office. As he was being driven to work, he



noted the cleared streets and then read the morning newspaper. It had a story about long lines of people waiting for medical help at one of the city's hospitals. He then began going through a pile of mail. One of the letters was a request for the mayor to speak at a meeting of homeowners. In the corner of the letter he wrote, "Yes, if possible." This meant that his secretary should check to see if he could keep the date.

There was also a letter from a church leader. He wanted to use some of the church's money to build new homes and apartments for the poor people in the city. The mayor thought the idea was good. He wrote a note to his assistant to see the church leader.

Two letters were from people who were angry. The garbage was not picked up on time in their neighborhood. Another assistant would take care of this matter.

The driver turned on the car radio for the news. As the mayor listened, he looked at a few more letters.

When the mayor entered the City-County Building, a small group of people were waiting outside his office to see him.

The mayor said "Good morning" and walked past them into his office. Half a grapefruit and a cup of tea were on a table in the room where he hung his coat. He picked up the tea, went to his desk, and looked through a stack of telephone messages.

Next, he told his secretary to ask the director of the Health Department to come up and see him. The mayor wanted to discuss the crowded conditions of the hospital that were reported in the newspaper. He wanted to do something about that at once.

The mayor's press secretary came in to tell him that a radio newsman was waiting to interview him. He wanted to ask the mayor about the crowded hospital.

The mayor explained to the newsman that extra money would be used to take care of the hospital's problems. He said that he was going to discuss this with the director of the Health Department.

An assistant, carrying a bundle of maps, entered as the mayor was talking.

The newsman asked about a report from the Police Department that said the number of crimes in the city was increasing. The mayor pointed out: "This is a problem all over the nation. We have raised police salaries. We have hired more policemen. This should help."

At this point, the director of the

Health Department hurried in. The mayor turned to the assistant holding the maps and asked, "Can't that wait? I'm awfully busy this morning." Both the assistant and the newsman left the office.

The mayor and the director spent about an hour discussing the health problems of the city. The mayor asked the director to work out a plan to help solve these problems. After their conference they answered the questions of waiting newspaper reporters.

When the director left, the mayor entered his conference room. Here a small group had gathered for a ceremony. The mayor proclaimed the day "Greek Independence Day." A girl wearing a Greek costume gave flowers to the mayor. He posed for pictures with the group.

Back in his office, he went through a new stack of mail. By now it was close to lunchtime. The grapefruit was still untouched in the side room.

At noon he was speaking to a group of businessmen. An assistant who helped him on political matters went to the business luncheon with him. On the way they discussed several city events, including last night's hockey game.

At lunch—his first real meal of the day—the mayor spoke for twenty-five minutes. He talked mostly about future plans for the city. He said that business and government should try to find ways to work together for the good of the city.

After lunch he had a meeting with two of the city officials who handled the city's tax money and planned how it should be used. They had been working for several months on plans for the next year. They knew that there would not be enough tax money for all the things the mayor had planned for the coming year. State law prevented the city government from raising more money by taxes.

The mayor discussed with the officials each project for the coming year. Because there would not be enough city tax money, he had to decide that no new city workers could be hired. Only small raises in salaries could be given. He approved only those building projects that were greatly needed by the city.

When the mayor saw what projects he had crossed off, he knew that some people would be angry at him. He knew that his decisions might cost him votes at the next election.

While he and the two men talked, a group of citizens walked into his conference room next door. They came to demand that he do something about problems in their neighborhood.

The mayor and an assistant met the citizens. A minister spoke for the group. He spoke of old cars left on the streets and of old empty houses that should be torn down. The mayor listened carefully and nodded his head. He explained the city's problems and promised to do what he could to help the people.

He said he would ask the police to haul away the abandoned cars in the

neighborhood. He also said he would have the old empty houses boarded up or torn down. His assistant made a note of each of these things.

When the people left, the assistant said he was sorry he could not handle the complaints for the mayor. "The people demanded to see you," he said. "They wouldn't talk to me."

At 4:30 most of the people in the mayor's office went home. The phones stopped ringing. Members of the mayor's staff drifted into his office. They knew that this was one of the best times of the day to work with him.

The assistant with the maps spread them out on the floor. He explained that the mayor would have to decide between two neighborhood projects for urban renewal. In both cases the city would tear down run-down houses. But the city did not have enough money for both. Both neighborhoods were slums. One neighborhood was near the stockyards. The other one was where the city wanted to build a cultural center.

The mayor thought very carefully. He read a report that said most of the families living near the stockyards hated the area and wanted to leave. He chose the neighborhood near the stockyards for urban renewal.

By 7:30 P.M. everyone had left the office. On his way home, the mayor shook his head as he told the driver: "It looks like snow again tonight!"

Why Must Cities Plan?

LESSON 8

Cities need systems

In the city many, many people live close together. There they can trade goods, services, and ideas with each other easily. They move about on foot, in cars, subways, buses, trains, and even on boats. They go from home to work, to stores, to school, to parks and museums. In a

single day the same man may take a bus downtown to work, walk to the corner store in the evening, and later drive his car to a friend's house for a visit. His movements and those of thousands, perhaps millions, of others crisscross through the whole city. People meet each other. They talk and trade ideas in the city's fast-moving everyday life.

The people of the city divide labor among themselves. The man in the factory produces goods. The bus driver helps him get to work. The salesman in the store may sell the goods produced by the man in the factory. The three of them depend on others who work for newspapers and radio and TV to get news and information. All these people depend on each other. The whole city works this way. Each person in the city depends on many others in his everyday life.

Because so many different people live so close together and depend on each other, there are many problems that must be solved. Whole systems must be set up to solve these problems. Many such systems are needed to keep the life of the city flowing and orderly.

In a way, a city is like a space capsule. The capsule has many systems that make it possible for astronauts to live in space. The systems must work or the capsule will not be fired into space. A city also has many systems that make life in it possible. Each system in a city serves a special purpose, and only if "all systems are go" can the city provide a good life for its people.

The cities have *transportation systems* to move people and goods from place to place. There are sidewalks, alleys, streets, expressways, and railroads used by walkers, cars, trucks, buses, and trains. There are other systems under the streets. There are pipes to bring water and gas, sewers to carry away wastes, cables for electricity, telephone lines for messages.

There are school systems to help us learn what we need to know in life. There are systems of laws to protect life and property, and to help the people of the city live in peace together. There are housing systems, park systems, and many more.

The needs of the city and its people are always changing. The systems must change to meet these needs.

And just as in the space capsule, there must be room for each system. Giving room to one system means taking it away from another. A new expressway may take land that had been used for housing. So the city's transportation system may affect its housing system by taking away space where people have lived.

Cities need planners

Because cities depend on so many different systems that affect each other, there must be planning for the city as a whole. Planning for only one system without thinking about the others can cause many problems in the city.

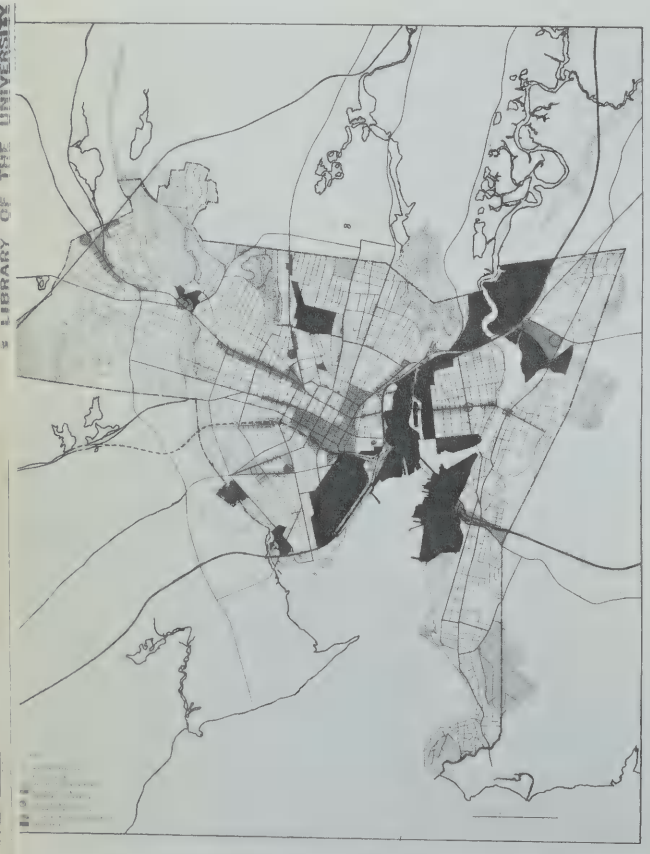
Because there are so many different

systems to be planned for, we must have specialists called *city planners*. Most cities have planning departments where the planners work together with men who are specialists on different problems. When planning for housing, for example, a planner may talk to architects, builders, and social workers. He may ask the people of the city what kind of housing they want and need. But when he plans for housing, the planner must also think how this will affect the other systems. He must always think of the big picture, the whole city with all its problems.

The planner must know his city

It is the planner's job to draw up a plan for the city. But before he can do this, he must know about the city and its people as they are now.

The planner must study the land and climate of the city. He must know where the city gets its water supply. The planner must know whether the land is flat or hilly, whether it is rocky or sandy. Such things affect the kinds of buildings that can be built and how much it costs to build them. He must know if some areas sometimes have floods. Perhaps



Maps, photos, and charts are used by planners to help explain the master plan to the people.

such land should not be used. Or steps should be taken to protect it from flooding.

The planner must study how the city's land is used. He must know how much is used for factories, stores, and offices. He must know how much is used for housing, for streets and roads, for parks and playgrounds. And he must know how much is still open or unused.

The planner must know about the city's buildings. How many of the houses are in good condition? How many are run-down? Does the city have modern stores and factories, or are some too old to be used? How many?

The most important thing in any city is its people. Planning must meet the needs and wishes of the people, and so, the planner has to know as much about them as possible. How many people does the city have? How many children does the average family have? How much income do the city's people earn? How do they spend their income? What kinds of jobs do they have? How much schooling do they have? How many families move within the city each year? How many leave and how many come to the city?

The people and the planner must work together

After the planner has studied the city, he reports to the people on what he has learned. He tells them how the city got to be what it is now. He tells them how it will be in the future if no changes are made. He tells them which neighborhoods may run down. He tells them how many jobs there will be and how many will be needed. He may tell them how the kinds of jobs change. Perhaps the city's first jobs were in trading, while later most of them were in factories. The planner may have found that today more people work in offices or that there are again more jobs in trading goods than in factories.

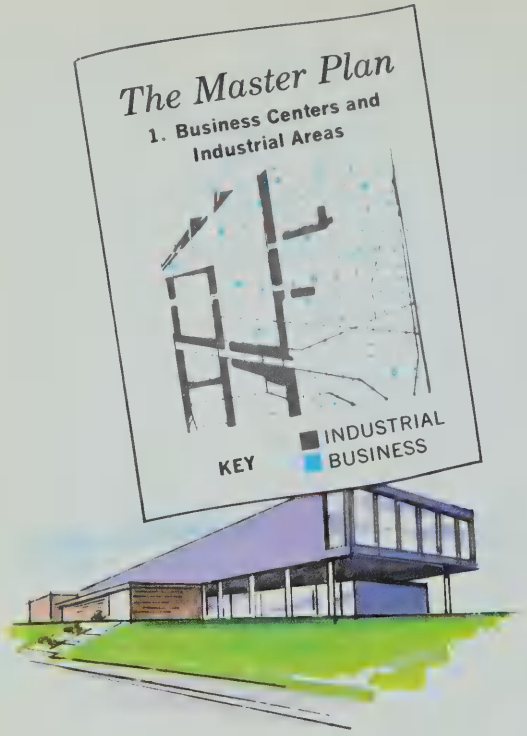
The planner also tries to find out what kind of city the people want. Do they like the city as it is? Could it be made better? How? What should be changed? How should the changes be paid for?

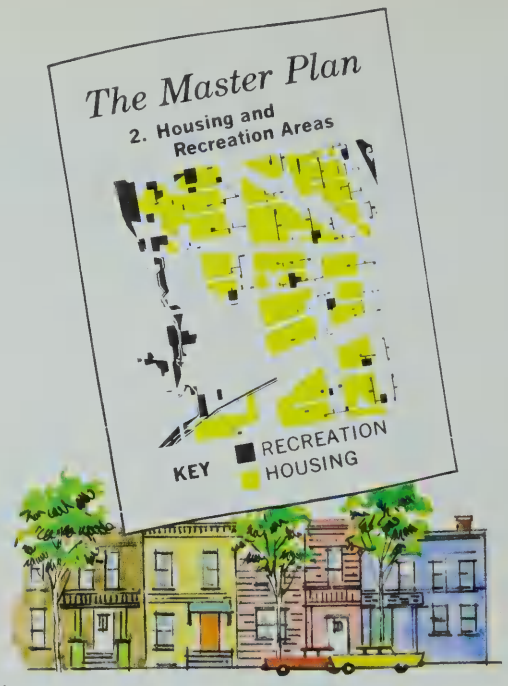
The plan must meet present problems and future needs

Now the planner is ready to put what he has learned about the city and what the people want into a *master plan* for the city's future.

The master plan must be for a city in which many different kinds of factories, stores, offices, and other businesses can do well. Then the city will have more jobs and income. It will still have enough jobs even if one kind of business does not do so well. The planner knows that if the workers and businessmen of the city cannot earn income there, they will move away. Soon there would be only a ghost town like Jerome, Arizona.

The planner must also think about keeping the city a healthy place to live. A factory might make a lot of smoke. That would be bad for people. The





planner will say that the city should have rules to control the pollution of air.

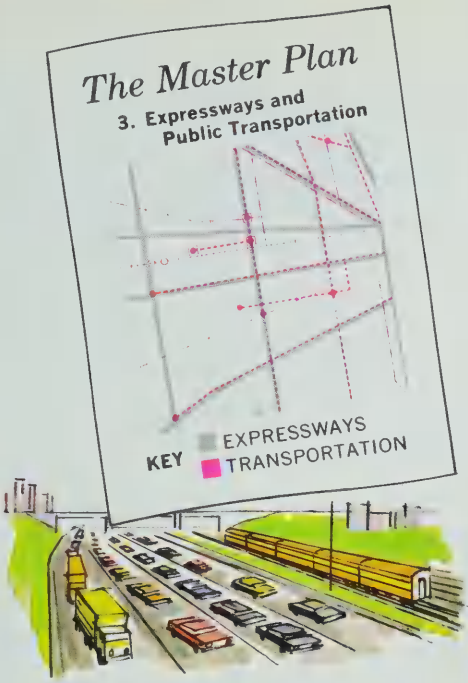
Many other things must be planned for, if the city is to be healthy and happy. It must have good housing. It must have enough fresh water. It must have good sewers. It must have enough space so that people can relax and have fun. It must have good transportation.

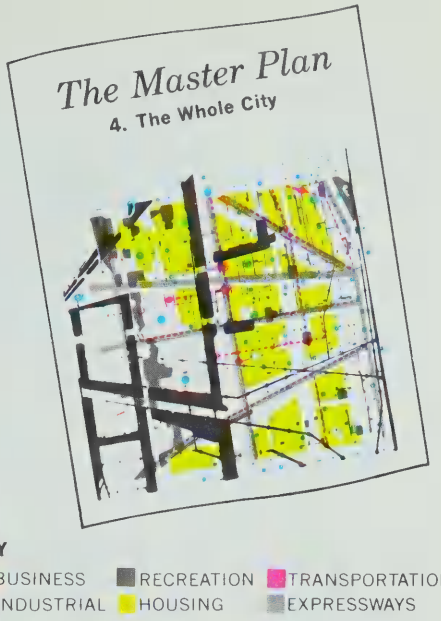
The city should also plan for beauty. A city with pleasant streets, green parks, and good-looking buildings is a better place to live. People will like to live there. And often such a city will attract more business, just as Pittsburgh did after it was cleaned up.

All the time the planner must think about what his plan means for the city as a whole. By now, you can probably see that one of his biggest jobs is making sure there is enough space for each of the things that the city needs. No matter how large a city is, it has only so much room. The planner must set aside enough of the right kind of space for the factories and stores, houses and apartment buildings, parks and playgrounds, streets and roads, and the many other things the city needs.

The plan must be for people

The planner must think of ways to help many different kinds of people live and work well together. When he is planning for jobs, housing, transportation, or schools, he must remember what he has learned about the city's people. Only then can he plan for a good city where people want to live, work, and play.





These maps show how different systems depend on each other. The planner must make sure that there is enough space for all the things a city needs.

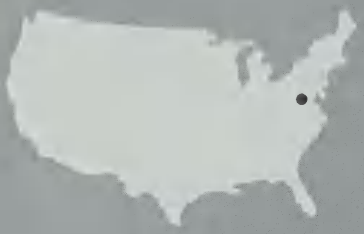
The plan goes back to the people

When the master plan is ready, it is presented to the people. The best of plans cannot be carried out if the people are not behind it. The city belongs to the people. They own its homes and many of its businesses. They pay its taxes. But people who study the master plan have to imagine things that they cannot see today. They have to imagine buildings that have not yet been built. They have to imagine new neighborhoods where now there are only old run-down houses. If people do not imagine the future, then the work of all the specialists who prepare the master plan is wasted.

The plan is the guide

Once the people and the planner agree on the master plan, it becomes a guide for the city and its people. When the city builds a road, or park, or school, it follows the plan. And when people want to build a house or start a business, they can look at the plan. It tells them which land can be used and helps them decide where and how to build. Of course, from time to time the plan must be changed because of new inventions, or because of changes in people's needs and wants.

The master plan must have many ideas that people like and that the city can afford to carry out. But many planners think that the plan should also give more ideas than can be carried out right away. The city and its people may not be able to do these things today, or tomorrow, or even in the next few years. But when you grow up, you might be able to make some of these ideas come true.



Planning Our Capital:

WASHINGTON, D.C.

Stand at the point where two rivers meet, and look north. From the banks of the rivers, land gently rises. A mile or two away are some low hills. They surround and shelter the land below them.

It is late afternoon. To the northwest, the wide Potomac River sparkles in the sun. To the northeast, the Anacostia River flows in the shadows of the trees along its banks.

Stand among the cattails and marigolds, and try to see a great city rising from this land.

The city of Washington, D.C., is to be built between these rivers.

The City of Washington in 1801.

Why is this city to be built? What sort of city must it be?

It must be a grand city. It is to be the capital of a new nation—the United States of America. The nation's chief city must be important to all its people, from Massachusetts in the north to Georgia in the south.

It will be a busy city. It will be the home of government offices and private businesses. Foreign nations will have offices in buildings on its avenues.

The city will be home for many people. It should be a pleasant place where people can live and work.

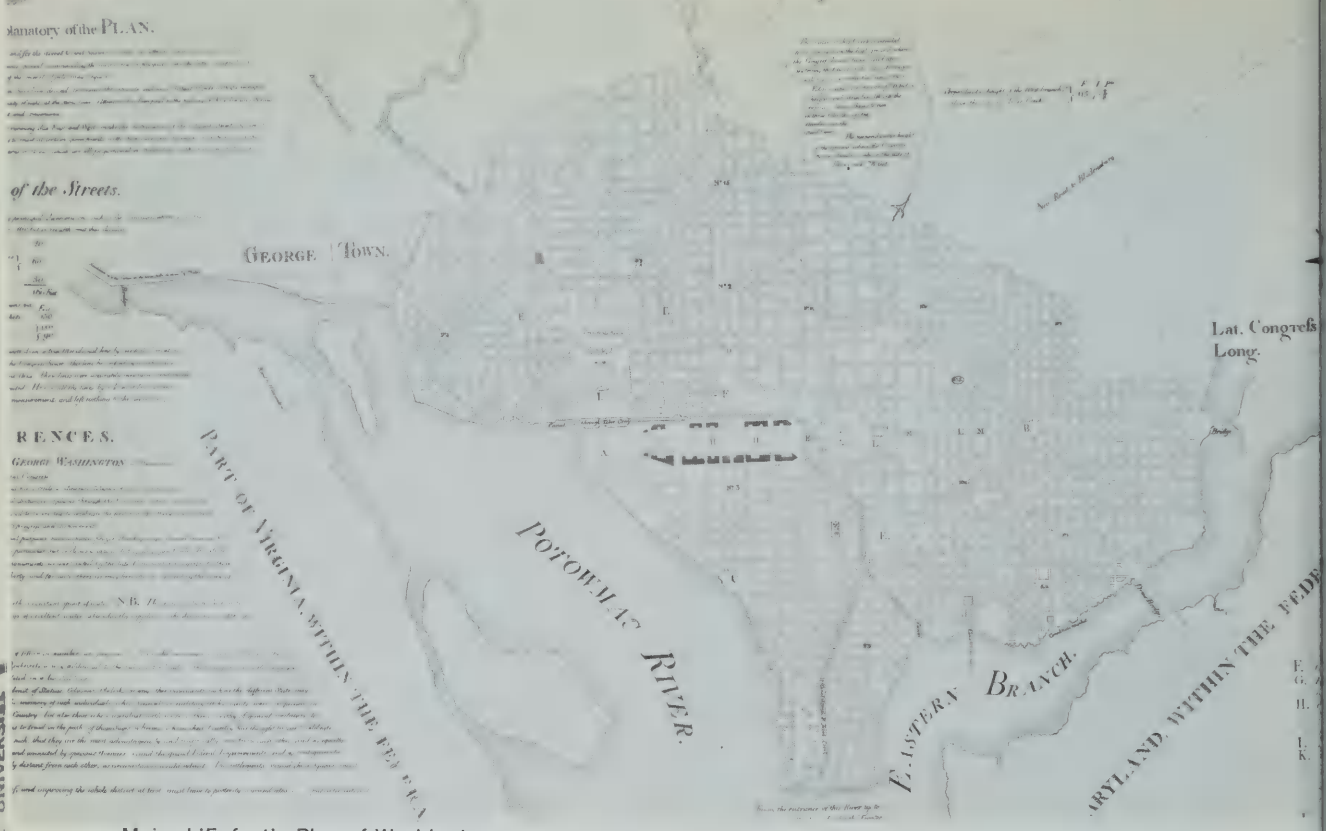
There are many things this city must be. It must be grand, the symbol of a great nation. It must be beautiful. People must also find it comfortable.

A city that will be all these things must start with a good plan. President George Washington has appointed a man who is both architect and engineer to draw up plans. He is Major Pierre Charles L'Enfant, a Frenchman who fought in the American Revolution.

The location for the capital city has been carefully chosen. It is near the center of the new nation. People from all over the nation will be able to reach the capital without traveling too far.

The location has good river transportation, and the Atlantic Ocean is not far away.

The city will lie in a *hollow*, protected by a ring of low hills. The men who chose the location hope that its beauty will not be lost as a city grows here.



Major L'Enfant's Plan of Washington.

It is June 1791. Major L'Enfant is going to present his first rough plan to President Washington and his advisers. One of the advisers is Thomas Jefferson, the secretary of state. Jefferson is an artist, writer, architect, farmer, musician, inventor, and scientist. Later he will become the third president of the United States.

Ideas come quickly to his mind. He has ideas about everything, including the plan for the new city.

Jefferson thinks the city should be built in squares. All the streets should run north and south, east and west, he says. He wants an open walk to run through the center of the city.

But Major L'Enfant has ideas too. He does not like Jefferson's plan for the city. He thinks that a checkerboard plan of this sort might be all right for flat land. But the spot chosen for Washington, D.C., is not flat. It has hills and hollows. L'Enfant wants the city to use the shape of the land, not just lie on top of it.

L'Enfant thinks Jefferson's city would be dull to live in. He argues for a more interesting plan.

Jefferson sees that he and the major have very different views. But L'Enfant is the planner, not he. Jefferson smiles and gives way. He wishes L'Enfant well in his planning.

The major begins to explain:

Start with the two most important

buildings in the capital city. One is the Capitol, where the Congress will meet. The other is the president's house. These should be built on important places where they will get attention.

Place the Capitol on a hill about a mile and a half from where the Potomac and the Anacostia rivers meet. Build the president's house on a lower hill about a mile northwest of the Capitol. Connect the two with a wide avenue lined with trees. This will give people a long, sweeping view. They will be able to see the president's house or the Capitol from far off. Trees will spread overhead along the wide avenue. This will make strollers feel they are in a park.

And would not a waterfall be wonderful? The waters of little Tyber Creek could be made to flow under the Capitol building. From here they would gush out and roll down to the Potomac. The high, wide falls would make the nation's most important building grander.

For the street plan, lay out a pattern of squares as Jefferson suggests. A city needs blocks like these for its many houses and stores. But do not stop there. In a great capital city, there must be open space. There must be room for statues and monuments. People must have a feeling of space and size in such a city.

And yet, this is their home. They must feel comfortable walking its streets and shopping in its stores. Can there be a city that will fit both monuments and people?

L'Enfant shows how he would do it. He would build a system of grand avenues over the simple square pattern of streets. These long, broad avenues would run *diagonally*. They would begin

A View of Washington in 1852

at important points in the city. The avenues would lead out from these points, like the spokes of a wheel. Where they crossed other streets or met one another, they would form squares and circles of different sizes. These spaces could be used for restful parks.

The avenues would stretch for miles, yet would not be tiresome. The many circles and squares would interest the eye. The little parks, with grass and benches, would let people rest along the way.

In a great capital city, there should be one grand open space. Important public buildings and fine monuments should be built here. The grounds should have formal gardens and sparkling pools.

In Washington this space would be the Mall, a great tree-lined public walk leading from the Capitol to the Potomac River. As people stood on the Mall, a hush would fall. They would feel the greatness of their nation's capital. Sweeping to the west, the Mall would lead people's eyes toward far frontiers.

And so Major L'Enfant presents his plan for the city. It is a good plan, fitting the city to the shape of the land. The plan will give meaning to the city and to the lives of the people who will live there. It is a large plan, a plan with a dream.

"We must not start with a small and mean plan," says the major, "for out of it will come a small and mean city. And this city of ours must be great."

President Washington and his advisers look at the plan. They begin to share Major L'Enfant's vision of the city. They praise the plan and suggest only a few small changes. The major goes back to draw a final plan.

In 1791 the United States was a very young country. It was a poor country. Many of its people felt they had to worry about the troubles of their own time, and not about the great city of the future.

Major L'Enfant, on the other hand, was an artist. He could think only of his plan and how to carry it out.

There were arguments. The President and some of his advisers wanted to sell pieces of land right away. Then they would earn money to pay for building the city. But Major L'Enfant wanted the government to wait. "Finish the streets and public buildings first," he insisted. "The land would then bring higher prices. Also, it is more likely that strong and beautiful houses will be built on expensive land. If land were sold now, at lower prices, poor houses might be built. They would spoil the city."

The arguments went on and on. President Washington admired the plan, but there were problems to solve in carrying it out. The major never lost sight of his dream city. He fought against any suggestions that would change it.

Nine months of work and argument passed. L'Enfant seemed to become more stubborn. Once he even tore down someone's partly built house because it did not fit into his plan. The President

The Washington Monument

sadly told Major L'Enfant that his job as planner of the city was at an end.

But the plan was kept. The avenues were laid out as L'Enfant had mapped them. The Capitol rose on the hill he had chosen, but his idea for a waterfall was never used.

The major saw much of the early work go on. He often walked about the new city. He watched workmen build streets, cut stone, plant trees. He would stop now and then to talk about the work.

Much has happened to the capital city since Major L'Enfant drew his grand plan. Washington has grown much larger in 175 years. Its growth has not always been well planned, and so the city has grown in all directions. Some parts have become drab. Some of the office buildings and houses are run-down.

But Major L'Enfant's plan for a beautiful city is still being used. Today many men are working on improvements for the city. They hope to make the city as beautiful as Major L'Enfant dreamed it would be.

There is a grave on a hillside in Arlington National Cemetery, across the Potomac from the city. On the gravestone is carved the plan for the city. It is the grave of Major Pierre Charles L'Enfant.

From this spot, one can see the whole great city he planned. The heart of the city beats sure and steady. It works hard to match the dreams of Major L'Enfant.

The grave of Major L'Enfant

Each of the new towns will have its own business area. Fewer people will have to travel to the city to work. Fast trains will connect the new towns with Washington.

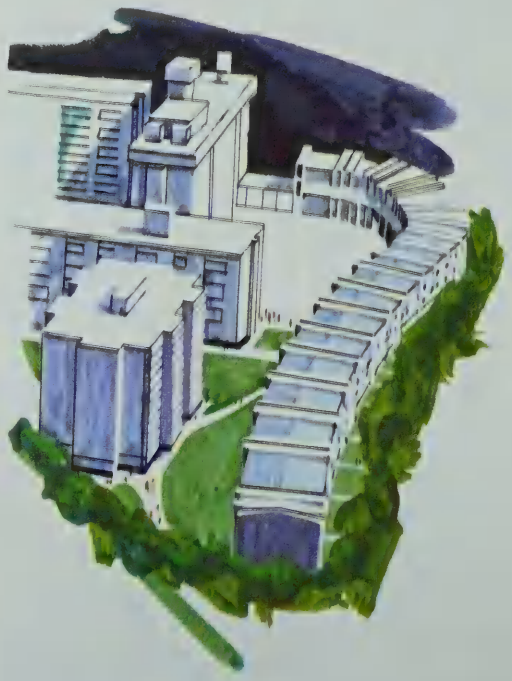
Washington, D.C., in the year 2000

In many ways Washington has become a noble city. In other ways Washington has become drab. But what has been done by man can be undone by man.

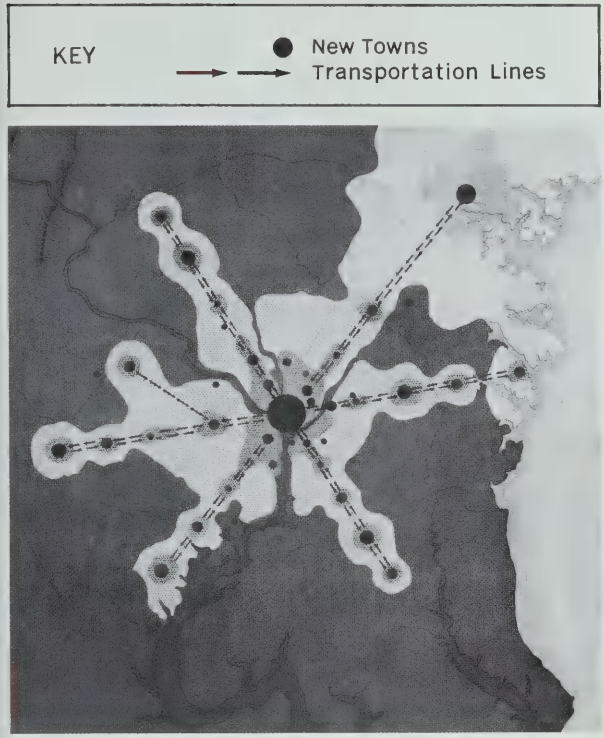
Today engineers, architects, designers, and artists are at work in the city. They are planning the shape of the city.

In the year 2000 Washington may look like a wheel. The hub of the wheel is the city, where many people will live and work. Along the spokes of the wheel will be new towns where many people will live and work. There will be quiet parks between the spokes. Farmland and woods will surround our nation's capital.

Government buildings, stores, and apartments will be built around small squares. People will be protected from bad weather, noise, and traffic.



The city will set a good example by building good houses and neighborhoods for people of all incomes and tastes.



Planners have designed a special neighborhood called the International Center. Foreign officials from all over the world will live and work there.

Monuments and grand buildings will always be important landmarks in the city.

Designs for Cities

I visited two cities
As I went on my way.
It's strange that these two cities
Had different things to say.

One city smiled and beckoned,
And said, "Please, won't you stay?"
The other seemed to turn its back
And grumble, "Go away!"

Have you been in a city
That made you glad and gay?
And have you been in one that made
You feel so glum and gray?

What is it in one city
That makes you want to stay?
What is it in another one
That makes you turn away?

—Leon E. Trachtman

Let us climb to the top of a hill and look down. A green valley lies below. Trees and rocks dot the hillsides. Streams flow into a sparkling river that curves along the valley floor. Overhead, clouds drift in the blue sky.

"How beautiful!" you say. The whole view is beautiful—not just the clouds or trees or river alone. All the parts together make this scene in nature lovely.

Now let us walk in the city. We come to a bridge over a river and stop to look at the view. The river seems to disappear around a bend. Buildings rise up on both sides of the river. A tiny park makes a splash of green on one bank. Small boats move past barges tied up at the docks. People sit on benches under trees. The way all these parts fit together make the view pleasant. This view has been made by man. It has been designed by man. The way the riverbanks, buildings, and park fit together makes up a city *design.*

Different cities have different designs. Sometimes a city's design depends on

where it is built. Streets and buildings are laid out differently on steep hillsides than on flat land.

Sometimes the designs of cities are different because the purposes of the cities are different. The capital of a state or nation should be designed to give space for parades, monuments, and public buildings. A factory city should be designed with plenty of space for modern factories and for roads on which goods can be moved quickly.

Design is what makes a city different from all others. Design in a city tells how much people think about their city. It tells how much they care about their city.

As you walk in a city, you can find designs everywhere. Some designs are as small as a few flowers arranged in a flowerbed. Others are as large as a big city park with trees, paths, ponds, and playgrounds. Some designs wake you up. They make you stop and stare.

Streets have different designs. Curving streets make people curious. What's ahead? they wonder. Long, straight streets may seem dull. Sometimes they make people say, "Well, we've seen all there is to see."

Straight streets do not have to be dull. They can be designed to give pleasant surprises. Trees planted along a street make it look more interesting.

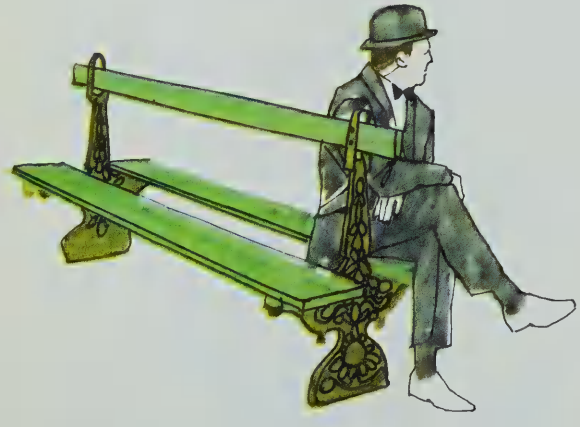
Little grassy squares help break up a long, straight street. Squares may be set like islands in the middle of the street. Traffic flows around them. Squares may be on one side of a street. With trees, flowerbeds, benches, and fountains, the squares become small parks.

Some cities have large squares. Many of them have historic landmarks in them. Long ago people came to the town squares to learn about new laws or to hear the latest news. They came to celebrate important events. Today the squares are not important in these ways. But they are still needed.

Squares make open spaces between buildings. Streets are open spaces too. But they are open spaces for going places. Squares are open spaces where people can stop and sit and visit with others. Squares are like outdoor rooms that people can share. They are pleasant places, with trees and flowers. They make the stone, brick, and concrete parts of the city seem friendly.

In many cities nature becomes a part of a design. Some cities have lakes, rivers, and hills. Some cities make good use of nature. They make parks along a river or lay out pretty roads on hillsides.

Parks are designed to be pretty. But city planners also think about ways for people to use parks. A city park may have a small zoo and a chain of lakes where people can row past lazy swans. A curving path may lead to a Japanese tea garden, where people can drink tea



and eat cookies. There may be an open hill in one corner of the park. There children can fly kites in the springtime and go sledding in the winter.

Some cities seem to be blind to nature's gifts.

Like houses, cities have furniture. Benches, streetlights, and drinking fountains are city furniture. So are wastebaskets, flowerpots, and street signs. Well-designed furniture for the city is important.

As you walk in any city, you notice old designs and new designs. Cities are wise to keep some of the city's fine old houses and neighborhoods. They tell stories of a city's past. They help people feel they have roots in the city.

New designs can be fun and exciting. They fit the changing needs of a city. Some cities are using new designs to make downtown shopping more enjoyable. They are keeping out all automobiles. They are turning the streets into little parks.

The area near the downtown shopping center of many cities is lively and colorful. It has theaters, restaurants, and large and small shops. There are big signs everywhere. You see them above the movie houses and theaters, over the shops, high above the streets. Some signs have flashing lights, or a bright neon glow. Traffic lights flash. Crowds hurry past. The designs here

seem to be changing all the time.

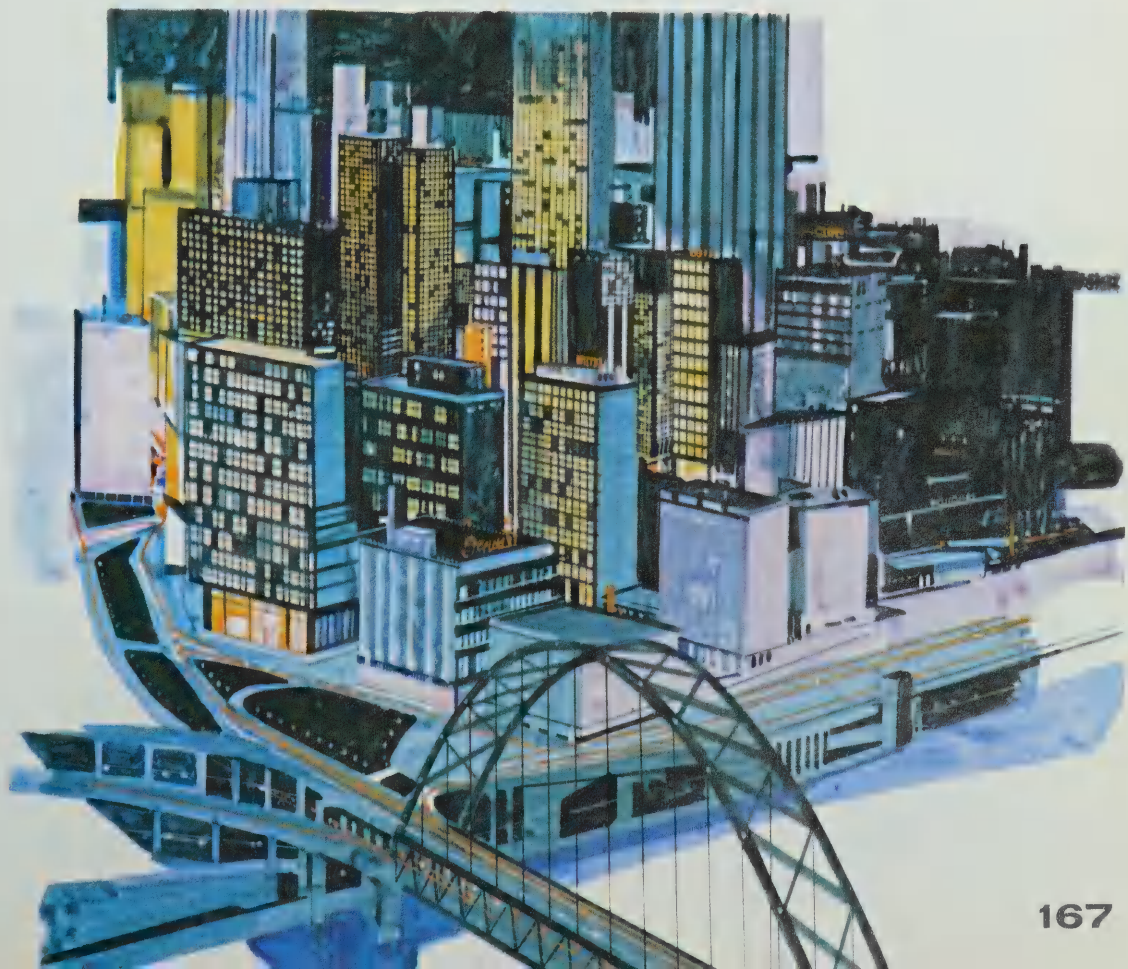
For a few moments you step out of the moving crowd and look around. With pleasure you discover the different shapes of the buildings. The glass sides of office buildings reflect the clouds moving in the sky. There is a wonderful moment, in the late afternoon, when the lights go on inside. Suddenly you can see right through the glass walls into golden beehives.

How beautiful a city's night scene is! The narrow skyscrapers, pointed towers, and huge office buildings are all lighted differently. They tower out of pools of darkness.

As cities grow bigger, planners are thinking more about design. A big city should have many interesting landmarks, say the planners. It should have neighborhoods that are very different from each other. People will then find it easier to make a map of the city in their heads.

City planners say differences help people see the city clearly. They say a city should have busy streets and quiet streets, new buildings and old. It should have big important places and small cozy places.

Above all, a city should be something that people love to look at and enjoy.



Keeping Cities up to Date

LESSON 9

The big iron ball is knocking down whole buildings with a great crash. Bulldozers are at work in cities across the United States. Old neighborhoods are being cleared away. Tall new buildings are rising from the cleared land. New playgrounds, schools, and apartments are being built. In other neighborhoods workmen are busy cleaning and repairing old houses, making them as good as new. Tearing down, rebuilding, repairing—all these are part of the job of keeping cities up to date.

Why are so many cities so hard at work on these big jobs?

Cities were running down

America's cities grew very fast. Years ago, people started pouring into the cities

from the countryside. At the same time people from other countries were coming to America. These newcomers also poured into the cities to look for work.

New and growing factories, stores, and offices needed workers. There were not enough houses in the city for the newcomers to live in. Often the newcomers were poor. As they crowded into the city, more houses were needed. Houses were built for them in a hurry. Most of them were built fifty or more years ago. Many of these houses were not built well. They were not good when they were new, and today many of them are completely worn out. But families still live in them.

Fine, large houses were built in the city too. They were for families with high incomes. Years passed. The cities became more crowded. Many people with high incomes moved to the suburbs. They drove to their work in the city, but they no longer lived there.

What happened to the fine houses these families left behind in the city? Some were bought by people who made them into small apartments. The apartments were rented to poor families. Many of these houses are still standing. Often they are crowded and shabby.

Many people in the cities began to worry about the families that were crowded into the cheap old houses and the big houses that had become run down. Some said, "Houses must be kept safe and healthy. There should be rules made to keep them that way." Others

disagreed. They said that no rules are needed. Every owner should decide for himself what he wants to do with his house.

In most cities those who wanted rules won. Now most cities have laws about run-down buildings. Houses that are not safe and healthy have to be fixed or torn down. Today many owners are fixing up their apartment houses. Bulldozers are knocking down the houses that are too worn out to save.

In most cases the biggest cleanup is going on in the oldest part of the city. This is usually in or near the center of the city.

The cities are losing people and businesses

As families with high incomes moved to the suburbs, the cities' stores and offices lost good customers. Many owners of businesses decided to move out to where their customers had gone. Many factory owners wanted to build new

People meet to talk about what can be done to help their city.

plants that would use the latest machines and best ways of dividing the labor. These modern factories need a lot of space. The businessmen said, "There is not enough open land in the cities. It costs too much to tear down old buildings to make room. We should go where there is more land. Then we can build modern factories and divide the labor better."

City governments are worried. Cities are losing people and businesses that pay taxes. They are losing people with good educations. They are losing people whose ideas and skills they need.

Now the cities have many neighborhoods with run-down houses and empty stores.

What can be done to save the cities? City and state governments, together with the United States government, try to find out. Specialists and volunteers study how to make the cities better places to live. They hold meetings to hear what the people themselves think should be done.

The cities have a big job

Rebuilding cities is not easy. Once land has been used for houses and streets, it costs very much to clear it and use it again. Many people have to find other places to live. Many of these people are poor. It is hard for them to find other places to live. Where will the cities get the money to do all the work?

These are some of the problems that cities are studying:

1. *Which houses should be torn down? How should the cleared land be used?* The cities must decide which land should be used for houses, and which for stores, offices, and factories. They must decide where tall or low buildings should be. How many houses should be built for families with low incomes? Where should they be built?

2. *Which old houses should be kept?* Cities have houses that are old or run-down, but are still good enough to

live in. These can be fixed up and saved. There are also old houses that remind people of the city's or the nation's past. Planners make lists of important old buildings that should not be torn down. There are old churches, famous old houses, theaters, and meeting halls. Many of them are not just "ghost" buildings. They are still useful.

3. *How can the people who must move be helped?* Tearing down houses and neighborhoods is hard on many people. Some are poor. They have trouble finding other places that they can afford.

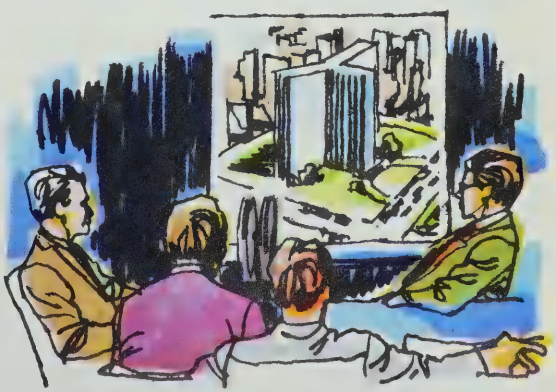
When their neighborhoods are rebuilt, there must be plans for better schools. There must be plans for jobs that the people can do. The people should be able to get to their jobs easily. The city needs to help people find new places to live when their old neighborhoods are torn down.

When old neighborhoods are torn down, it is hard on businesses too. Usually small stores pay low rent in the old buildings. Many storeowners could not stay in business if they had to move and pay higher rents. Some stores have taken years to get regular customers. They have to start all over again when they move.

Sometimes stores of the same kind gather in one neighborhood. One block might have many secondhand bookstores. The owners stay together because people like to look for books in a number of shops, not just one. When

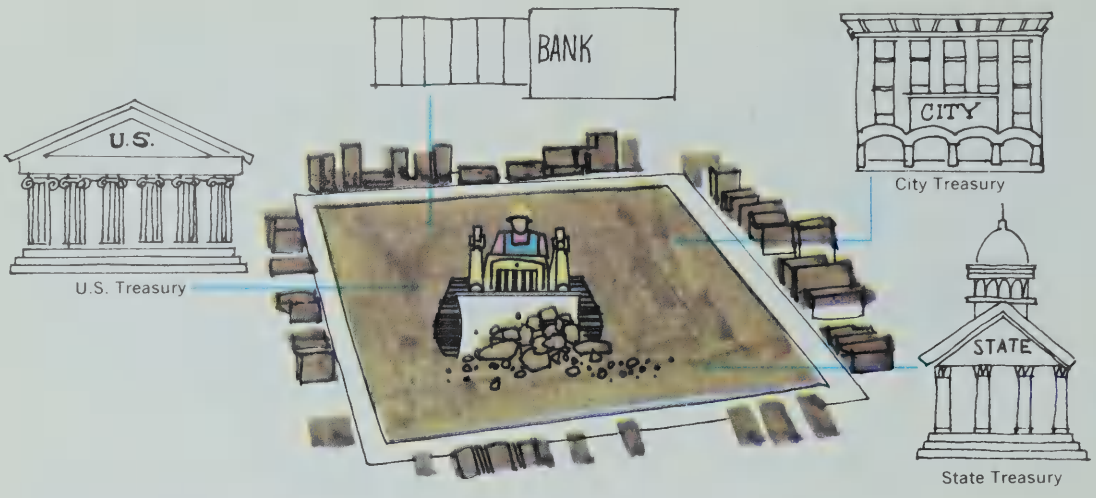
How should the cleared land be used?

Which old houses should be kept and repaired?



How should the rebuilding of a neighborhood fit in with city planning?

Rebuilding cities costs money



Private businesses, city and state governments, and the United States government all help to rebuild our cities.

such a block is torn down, the storeowners have a hard time locating near each other in another part of the city.

Cities must plan to help these families and businessmen find other places to live and work.

4. *How should the rebuilding of a neighborhood fit in with city planning?* When land is cleared and used again, the new uses must fit in with the plans for the city as a whole. Where should new streets run? Where should new schools and hospitals be placed? How much of the cleared land should be used for parks? These questions are important to the whole city.

Who pays for rebuilding the cities?

Rebuilding cities costs a lot of money. Where does it come from?

The job is too big for private business alone. People who want to build houses for a profit may not be able to pay for the cost of clearing the land. The job is even too big for most city governments. They do not have enough tax money to do everything that is needed. But they can ask for help from the United States government. It collects more tax money than the cities do.

Big cities must keep up to date. If they do not, the whole country will be hurt. The run-down cities will get worse. The better cities will soon get problems from growing too fast.

That is why the United States government helps cities. It gives a city money to study its problems and prepare a plan. It pays part of the cost of clearing the land. It helps pay the cost of moving poor people to other neighborhoods. It helps get loans for the builders who will

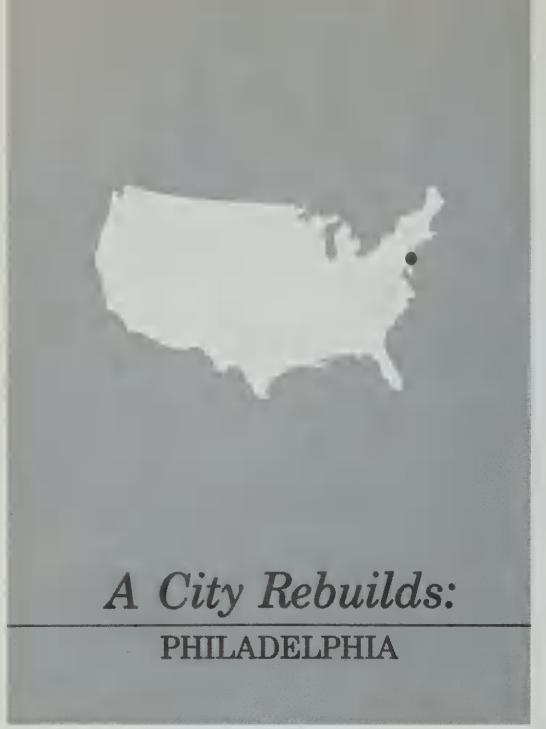
build housing for families with low incomes. The United States government gets its tax money from people all over the country. And it uses the money to help cities all over the country.

The United States government does not pay all the costs. Many of the costs for clearing land or helping people move are shared by the cities. Many of the new buildings that are built are paid for by businessmen who use their own savings or savings that they borrow. Homeowners often use their own savings to fix up their homes.

Rebuilding is never finished

Keeping cities up to date is a job that never stops. As more people come to the city, new houses must be built. People's incomes and needs change. Houses get old. They must be kept up or torn down and replaced. Factories and stores get out of date. Streets must be changed to meet the needs of new kinds of transportation.

Cities are never finished. They must always be ready for change. Business or government cannot do the job alone. We all must help to keep our cities up to date.



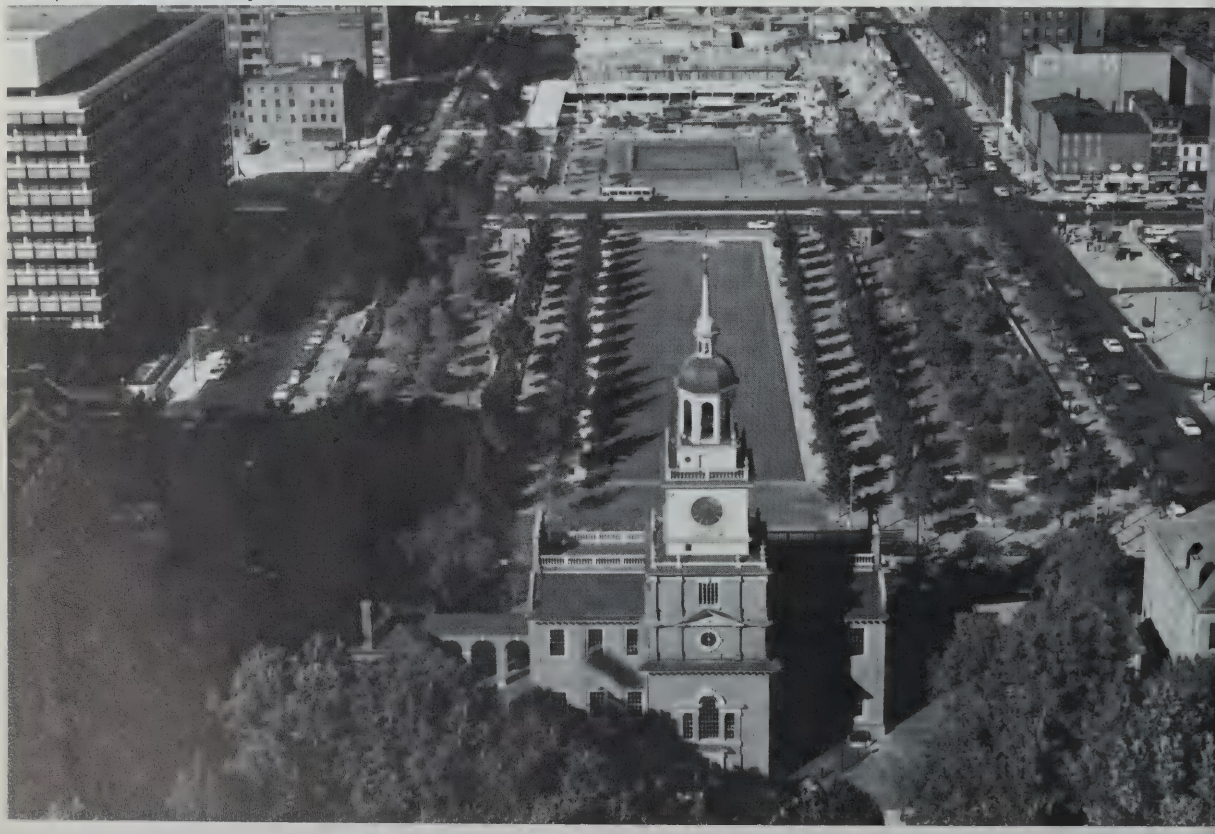
A City Rebuilds:

PHILADELPHIA

Our nation was born in Philadelphia. In a famous building we now call Independence Hall, our nation's first leaders signed the Declaration of Independence. A few years later, another group of leaders gathered there to write the Constitution of the United States. The Declaration of Independence said that the United States should be a new, free nation. The Constitution became the guide for the nation's government.

Independence Hall is in the oldest neighborhood of Philadelphia. In that neighborhood were houses, churches, and shops built long before the Declaration of Independence and the Constitution

Independence Hall today.



Before Philadelphia began to rebuild, Independence Hall was in a badly run-down neighborhood.

were written. It was a pleasant place to live, work, and worship. It was the young and lively city of Benjamin Franklin.

Many years later, the neighborhood had changed. It was no longer pleasant. Independence Hall and most of the other famous old buildings were still standing. But they were hidden by dirty factories and warehouses. Some of the fine old houses where great men had lived were being used as warehouses or stores.

Many other parts of Philadelphia had changed in the same way. The city had grown to over two million people. But with its growth had come crowding and decay. The city that had been lively, young, and pleasant now seemed old and tired and dirty.

Around the city's fine shops and great department stores was a jumble of dingy buildings and slums. At the center of the city, just across from City Hall, stood a huge railroad station, darkened by years of smoke. Behind it a tangle of railroad tracks ran along the top of a huge old wall. People called it the "Chinese Wall." And beyond the central city spread miles and miles of shabby row houses.

The people of Philadelphia did not like what they saw. Traffic jams and ugly buildings were not their idea of a pleasant city. Many moved to the suburbs. They still came to the city, but only to work. The stores and shops of the central city began to lose business.

Many of the people who stayed behind in the city were poor. Their houses were not kept up. Their neighborhoods became slums and Philadelphia's slums were spreading.

But many Philadelphians loved their city. They wanted to make it a lively, pleasant city again, a city they could be proud of.

"The trouble with Philadelphia is us," said one of them. He meant that the people of the city must stop wishing and get to work. And they did.

Meetings were held. The people talked over their ideas. Young and old people had many ideas about how to change their city. Many good ideas came from the city's schoolchildren. Little by little, plans were made to change the city.

It was easier to make the plans than to carry them out. Even in the city government there were some people who did not want to rebuild the city. They were well off the way they were. "I'm all right," some said. "Why bother?"

Children in Philadelphia helped the planners. They had many ideas about how Philadelphia should be rebuilt.

For a while it looked as though the plans might come to nothing. But then things started to happen.

People with new ideas were elected to the government. They really wanted to rebuild the city. They looked for ways to make the plans work.

Then the railroad owners decided to tear down the old station and "Chinese Wall." With the ugly wall and railroad station out of the way, there would be a lot of land right in the center of the city that could be used for new buildings.

Before one brick of the wall came down, the city was ready with a plan for the land. "If you wait until someone else makes a plan, you're licked," said Edmund Bacon, who headed the city planning commission. He and the other planners said that only one-third of the land should be used for buildings. They wanted to use the rest for a walkway with sunken gardens and little shops. The planners knew that if they did not save the land for open spaces at this time, they might never have another chance. They knew that once buildings are put up, they are hard to remove.

The railroad owners were not happy about the plan. They owned the land and wanted to use most of it just for buildings. In that way the railroad companies could get more income from the rent.

The planners and the railroad men met to talk about their ideas. For many days they discussed their differences. Finally they agreed on a new plan. Office

buildings would be built on half of the land. The rest would be used for sunken gardens and a skating rink. The railroads and subways would run under the buildings. Thousands of people from all over the city and from the suburbs would come to the new shops and office buildings.

Today this area is callen Penn Center. Its skyscrapers and gardens are famous across the country. Penn Center is not the only thing that went up when the "Chinese Wall" came down. All around it are new shops, new apartments, and new offices. They never would have been built there before. Nobody wanted to have a shop or apartment building next to the dirty old wall with its railroad tracks.

Penn Center shows what can happen when a city plans and rebuilds well. By tearing down something that was ugly and no longer needed, room was made for something beautiful and useful. And because something beautiful and useful is there, the whole city is better off. There are more jobs for those who work in stores and offices. The city gets six times as much tax money from the land where the wall had been as it did before. And

A few years ago, hundreds of trains ran along the old Chinese Wall (left). Today, Penn Center (right) stands in place of the old wall.

The old Dock Street Market.

The new market center in South Philadelphia is shown below.

everyone is more willing to come downtown to shop.

At the other end of the city's center was Independence Hall, in Philadelphia's oldest neighborhood. Over 15,000 trucks jammed the narrow streets each day. Many of them were going to and from the wholesale food market on nearby Dock Street. The market had been built when Philadelphia was still a small city. The city had grown, but the market had not. Loaded trucks waited for hours to get through the crowded streets. The neighborhood could never be rebuilt as long as the market was there. But the market supplied food for the city.

Where could the market go? There was little open land anywhere in the city. Then a young businessman had an idea. The city had a huge garbage dump in South Philadelphia. Why not fill in the rest of the dumping area and build a new market there? It was close to the river, railroads, and expressways. Boats, trains, and trucks could get to it easily.

People went to work. The city helped the Dock Street businessmen get loans to build new buildings. It filled in the land and laid out new streets. In a few years the new market center was ready to be used and the old Dock Street Market was torn down.

In the meantime, specialists went through the old neighborhood. They found out which buildings were worth fixing up. They found out which buildings were important in our country's history. The specialists found others that were too run-down to save. These buildings were torn down to make way for new houses and stores.

Three skyscraper apartment buildings were built on the land where the market had been. Soon many people wanted to live in the neighborhood. Some began buying the old houses and fixing them. The city made rules about how these houses should be fixed so that they would look the way they did when our nation was founded at Independence Hall.

Today the neighborhood is a beautiful mixture of old and new. The tall towers of the new apartments rise high above the old market area. But the fine old red-brick houses on the narrow little streets behind them look much the way they did when Benjamin Franklin and George Washington walked there.

Philadelphia's oldest neighborhood is an example of how a city can improve itself by saving the best of the old and taking away what no longer fits.

Philadelphia is well on its way to saving the heart of the city. But what about the city's poor who live in the thousands of run-down row houses? Philadelphia's leaders know that something must be done to give them good housing. If it is not, the city cannot really come back to life.

Most of the houses shown above were torn down. A park and playground were built in their place.

The run-down houses shown above have been torn down. The new houses shown below have been built in their place. Rents are low. Families with low incomes can afford to live here.

City officials help people find new places to live when they must leave their old neighborhoods.

To help bring the city back to life, Philadelphia has many projects for rebuilding its old neighborhoods. In most of these projects the worst houses are torn down. Then the cleared land is usually used for new houses and apartment buildings. The new houses and apartment buildings belong to the city. Rents are low. Families with low incomes can afford to live there.

Not all the old houses are torn down. Many of them can be fixed by their owners. The city helps many owners get loans so that they can paint and repair their old houses.

Philadelphia has other ways of helping poor families find good houses. The city buys single houses here and there throughout the city. Then the city repairs them and rents them to large families with low incomes. In this way the city can have good housing for large, poor families without having to tear down whole neighborhoods.

The people of Philadelphia know that in spite of all its work, the job has just begun. Too often the people who live in the houses that are to be torn down simply move into other neighborhoods. Then these neighborhoods become overcrowded and begin to run down too.

Philadelphia has set up a special department to find housing for people who have to move. The problem has not yet been completely solved. But today more and more families are helped to find a good place to live.

Because nothing was done for so many years, the city must work very hard and very fast to catch up. Much more work and money will be needed before Philadelphia is the kind of city its people want it to be.

But Philadelphia's people and leaders know its problems and are doing something about them. Many of the ideas for rebuilding cities were first tried in Philadelphia. Today they are used in cities all over the country.

The people of Philadelphia are still looking for more new ideas. The people of Philadelphia have made up their minds that their city will not lose its fight to stay up to date.

Before and After

In almost every part of the country, citizens are working to save landmarks of beauty and history.

—President Lyndon B. Johnson, 1964

Before

A street of colonial houses in Providence, Rhode Island, is made to look as it did two hundred years ago.

After

Before the year 2000 we must build as many buildings as our country has built in the last three hundred years. We must be sure to build not just as much as we can, but as well as we can. Above all, we must build for people.

Before

Run-down houses in Washington are torn down to make way for pleasant new houses and apartment buildings.

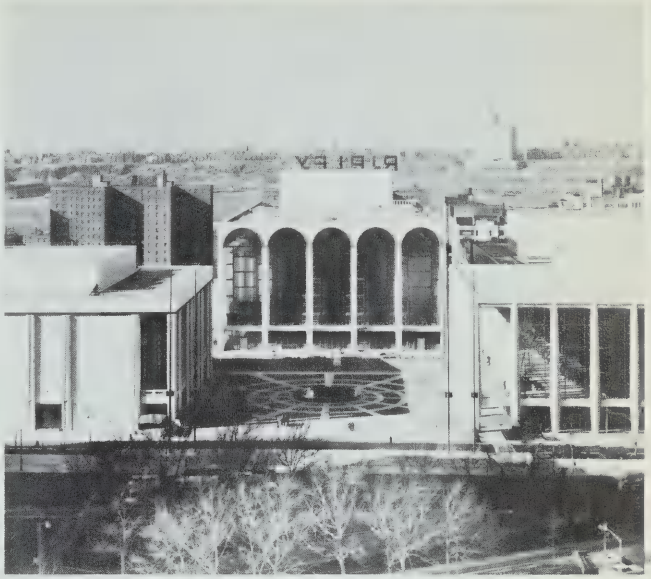
After

Before — Many families live in these new Honolulu apartment buildings. Only a few families could live in the houses that once stood here. — After

Before — An office building in New Orleans, Louisiana, is not torn down—but gets a new face. — After

Our cities need all kinds of buildings—some pretty, some old, some fat, some tall—as different from each other as people are.

We must make room for the arts in our cities. The arts bring us more than pleasure. They bring true civilization to our cities.



Before

An old neighborhood in New York City gives way to a center for the arts. It is called Lincoln Center.

After

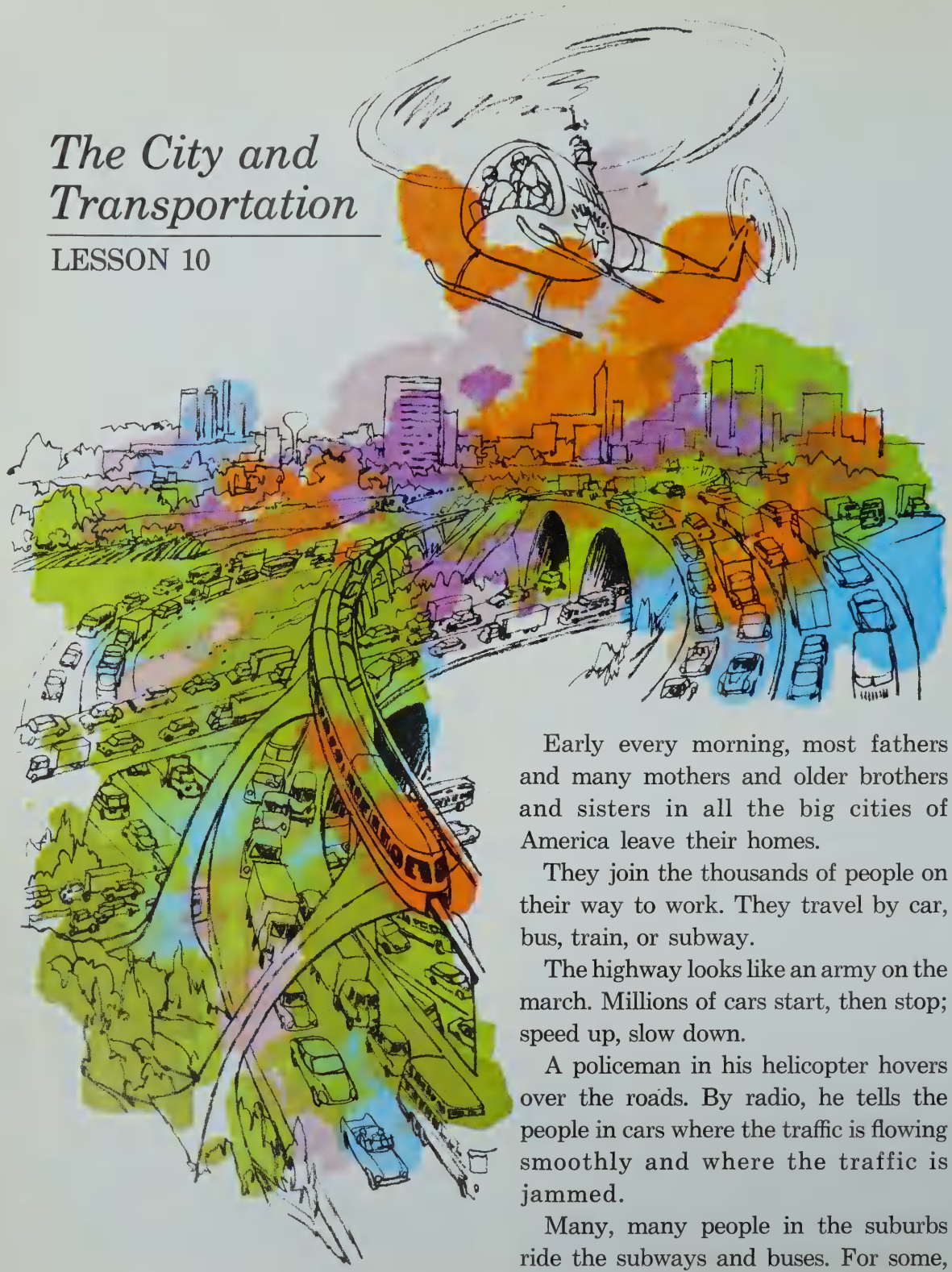
Before

The University of Illinois in Chicago is built where houses and factories once stood.

After

The City and Transportation

LESSON 10



Early every morning, most fathers and many mothers and older brothers and sisters in all the big cities of America leave their homes.

They join the thousands of people on their way to work. They travel by car, bus, train, or subway.

The highway looks like an army on the march. Millions of cars start, then stop; speed up, slow down.

A policeman in his helicopter hovers over the roads. By radio, he tells the people in cars where the traffic is flowing smoothly and where the traffic is jammed.

Many, many people in the suburbs ride the subways and buses. For some,

the ride is long and tiring. It has been hard work getting to work.

After the people have reached their jobs, the traffic quiets down. But not for long. In the late afternoon, after four o'clock, the traffic flood gets heavy again. By evening it has again quieted down.

This is what happens every morning and every afternoon of every workday in the big cities.

Everyone who is part of this traffic rush has often said to himself, "How good it would be if I could get to work faster—and safely."

Millions of people who work in the cities share these thoughts. They are repeated everywhere—in Boston and Los Angeles, in Hartford and Dallas, in Cleveland and St. Louis.

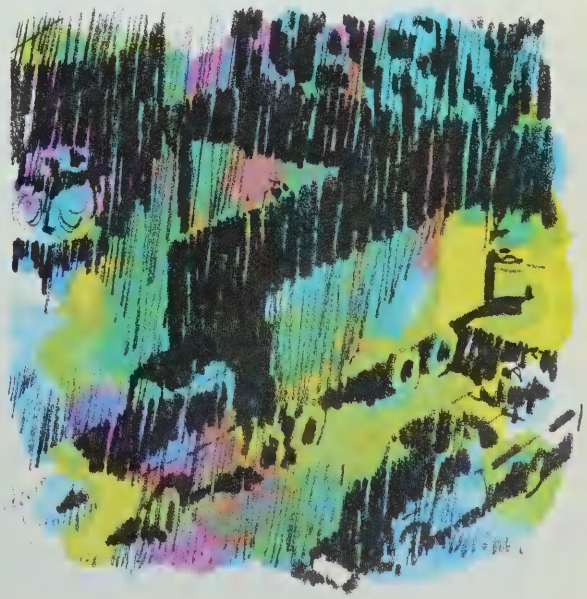
And so the transportation problem has become America's problem. *How can the people in the big cities move from place to place quickly, easily, safely, and cheaply?*

Why should people worry so much about transportation?

People worry because the city is the marketplace of goods and services. People worry because goods and services produced by specialists on the farms, and in the factories and offices, are bought and sold in the cities. Without transportation, there would be no trading. Without trading, there would be no cities.

The city is also the marketplace of

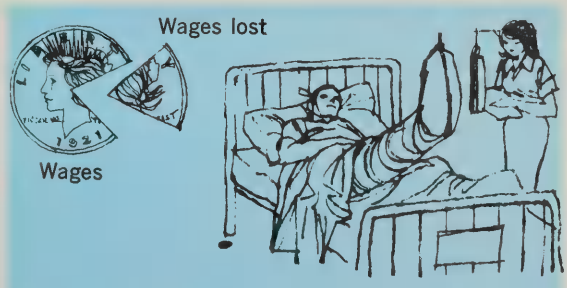
ideas. Large and small groups of people meet in different parts of the city. They get together to trade ideas about business, science, politics, art, music, and many other things. Without transportation, they could not meet.



Transportation specialists measure:

1. Time used up in transportation.

2. Traffic accidents in the city.



3. Costs of accidents: wages and production lost by families and the United States.

4. Housing space lost because of express highways.

When people want to do something about a problem, *they have to know how big it is.*

The grocer measures the weight of vegetables. The salesman measures the size of your foot for new shoes. In the same way, transportation specialists measure the size of the transportation problem.

Transportation specialists gather these figures and study them. They find that the problem is *enormous.*

What are the causes of the transportation problem?

Before there were such things as trains and automobiles, people had to live near their workplaces. The people who worked in stores and offices lived near the center of town, so that they could walk to work easily. The people who worked in factories lived near the factories, so that they could walk to work easily.

When there were more and bigger factories, more people with many skills came to the cities to work in them. With more factories came more stores and offices. The cities grew. The walk to work took longer and longer.

Then businessmen had the idea of transporting people from their homes to workplaces, to shopping places, and to other places. The people had to pay a price—a fare—for each trip.

As new and better means of transportation were used, people could travel faster from one place to another.

Transportation in Cities

As people moved faster from one place to another, the city grew bigger and bigger.

As new and better ways of transportation were invented, some of the old kinds of transportation were no longer used. For example, streetcars took the place of horsecars. Then buses took the place of streetcars.

There were many new and different kinds of transportation, but most people chose the automobile. With cars, people could go *where* they wanted to, *when* they wanted to.

Cars were cheap in America, thanks to Henry Ford. Gasoline was cheap in America too, thanks to the rich oil fields and the work of chemists.

But the cities of America had not been built for millions of automobiles. The streets were too narrow and there was no place to park.

The centers of our cities are weakened when there is not enough space. People

do not want to shop downtown. Many large stores may have to close.

If the transportation of the city depends on cars alone, many people, especially the poor and the old, will suffer. These people would like to choose other ways to get around the city, but there are no other ways in many cities.

In some cities, walking is difficult and unpleasant because much pleasant land has been used up for roads and parking lots.

In some cities, there are not enough buses and other kinds of transportation to carry people from neighborhood to neighborhood. In these cities, there are neighborhoods where there are jobs. People who want these jobs may live in other neighborhoods. They cannot get to the jobs. They cannot afford a car.

In these cities, businessmen lose money. They suffer because they cannot get workers. The people who cannot get to the jobs suffer. Because of this, the city and the entire country also suffer.

How can the cities improve their transportation?

Some people think that automobile drivers might prefer to use buses and trains for travel someday. But most of these transportation specialists say, "Even if bus and train rides were cheaper, most people would still want to drive their cars." Others say that if trains and buses were comfortable and could run more often and run faster, more people would use them.

Who should own these new buses and trains—the city or the businessmen? And how much should the fares be? Should the income from the fares pay for all the expenses? Or should the city help to pay for these expenses with tax money?

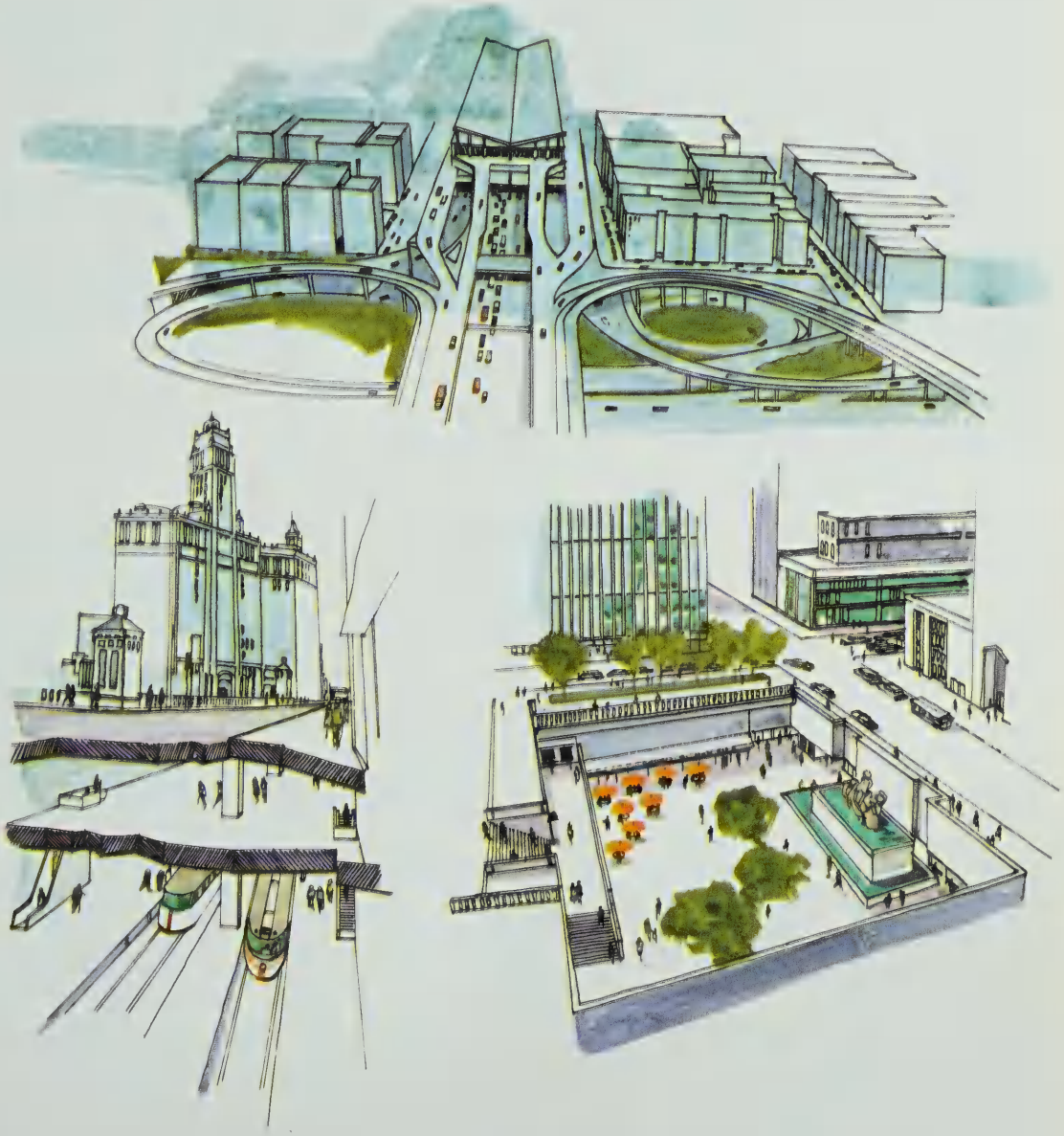
Some transportation specialists think the city should offer a choice to people who want to walk. They think some people would enjoy walking to work and to the stores if the sidewalks were protected from bad weather. Then, if the sidewalks were bordered with flowers and lined with trees, people would choose to walk even longer distances.

Some specialists say that balconies over streets should be built for walkers. Streets could be used for parking. The expressways could be built below the street level to provide fast transportation for cars and trucks.

Over five hundred years ago, Leonardo da Vinci, a man of many ideas, wrote that there should be a separate level for sidewalks in the city. Many architects of our time, such as Le Corbusier, have thought this a good idea too.

Of course, buses and trains cannot go everywhere people want to go. And there are many people who will still use cars because they do not want to ride buses and trains. These people want wider streets and more underground garages downtown.

Who should pay for all these things? Should the money come from taxes? Should the owners of cars, buses, and trucks pay for them?



The future of transportation depends on how people of the cities and the government work together to solve the problem.

The people of the city should have many choices of ways to get around the city. If the city gives choices between walking, driving a car, and riding a bus or train, the city will be a happier place for everyone. The city will also make better use of its land, land that is getting scarcer all the time.

Where People Mean More than Cars:

SAN FRANCISCO

Set like a bright jewel between the Pacific Ocean and the mountains of northern California is one of the most beautiful and exciting cities ever built by men.

To people for hundreds of miles around, it is known as "the City." To them, no other city in the world is quite so wonderful.

Let us look at the City.

It is bounded on three sides by water. Mountains tower on the fourth side. The Golden Gate Bridge arches across the blue waters of the bay.

A San Francisco cable car

The Golden Gate Bridge

In the City, old-fashioned cable cars carry passengers up the steep streets to Telegraph Hill. From Nob Hill old houses and hotels look down on the City's shining skyscrapers.

There are bright birds in the wide green parks. Sea breezes blow and the smell of fresh fish floats up from Fisherman's Wharf near the bay.

Fisherman's Wharf

Thousands of people go to the City every day to trade goods and services and ideas. Thousands more go to listen to music, to look at paintings, and to walk through the narrow streets of Chinatown.

The City is a center of banking, trading, transportation, and culture. The City is filled with all the exciting choices and opportunities of a huge city. But visitors say it is neighborly, too, like a small town.

Have you guessed the name of the City?

The City is San Francisco!

Because San Francisco is such a wonderful city, many people have wanted to go there to live. So many, in fact, that the city has a serious problem of overcrowding.

To understand these problems, we must go back a few years and take a closer look at San Francisco.

This is the center of San Francisco. Traffic moves along Market Street, the city's main artery.

In one of the city's tall office buildings Fred Mason steps out of an elevator and enters his office.

"Good morning, Mr. Howard. Sorry I'm late for work again. The traffic was terrible!"

"You look all in, Fred," says Mr. Howard.

"Well, I've been sitting behind the wheel of my car for almost an hour, driving just fifteen miles. I'm pretty tired. I don't know where all these cars come from!"

In one of the city's suburbs a housewife is talking to a friend on the telephone.

"No, Mary. I'm afraid we just can't make it tonight. Joe is so tired and nervous when he gets home. He just wants to sit and watch TV. It's that drive back from the city."

Conversations like these took place almost every day. San Francisco was suffering growing pains. More and more people were coming to live in the city. Business was good. Many people could afford to buy a car. And almost everyone wanted to drive his own car instead of taking a bus. The buses were noisy and uncomfortable. So almost everyone drove.

But there was not enough room on the roads for all the cars—especially in the morning, when everyone drove to work, and in the evening,when everyone drove home. The roads became jammed with cars and buses and trucks. Surrounded

by water and mountains, San Francisco soon had more cars per square mile than any other city in the world.

The people of San Francisco began to think. "What we need," many of them said, "are more *freeways* with no stoplights or sidewalks or side streets. We could drive faster to and from work. There would be room for all the cars."

A few people argued that *public transportation* should be improved. "That way," they said, "some people will leave their cars at home. They will ride the bus or train to work."

The United States government knew of the problem of too many cars and not enough roads in San Francisco. The government was willing to pay part of the cost for new freeways. But the government was not willing to pay for new trains and buses.

So the people of San Francisco hired engineers to build wide lanes of concrete across the city and out into the suburbs and countryside. One freeway after another was built.

But the new freeways did not seem to help. People were still late for work. They still had to drive long hours through creeping traffic and honking horns. What was the matter?

One reason was that many of the people who had lived downtown had decided to move to the suburbs. The automobile and the new freeways gave people more choices of places to live. They no longer had to live near their work. Many new houses and small towns were built along the freeways. So many more people moved out of the city. And they drove to work every day. Soon the new freeways were just as crowded as the old roads had been.

Some people thought the freeways were more crowded than before.

What was worse, there were more accidents on the freeways. Cars kept running into one another. Many people were hurt or even killed. Many cars were damaged.

And when all the cars got to the city, there was no room to park them.

"We need bigger parking lots in the city," said many of the drivers. "And we need more freeways."

Many businessmen wanted more

freeways. They said, "The people who live in the suburbs do not come downtown to shop. The freeways and the parking lots are too crowded. We need more freeways and parking lots."

Those who sold goods in San Francisco that had to be shipped in by truck were also worried. The farmers who brought fresh fruits and vegetables to the city had to raise their prices. They had to pay for the cost of trucking them over crowded highways. Store owners had to raise their prices so that they could make a profit. The customers complained.

All these people wanted more freeways.

But there were many people who did not want more freeways.

"Look what is happening to our beautiful city!" they said. "Look how many of our parks are buried under concrete roads and parking lots. Where are the birds that sang in them? All we can hear is the rush of motors and angry horns. We cannot smell the sea anymore and the sky is cloudy from the smoke of cars."

Every time a new freeway was built, blocks of homes and stores had to be torn down to make room. The people had to move. Many of them had lived in their neighborhood all their lives and did not want to move. Some of San Francisco's most exciting neighborhoods were split by ribbons of concrete. No one liked to see and hear the cars roaring past all day long. Many of these people moved out of the city.

A new freeway is being built. Many stores and houses must be torn down to make room for it.

The city officials were worried. Every time a store or house was torn down to build a new freeway, the city lost money. The people who had lived there no longer paid taxes. As one city official said sadly, "We cannot tax a road."

Also, most of the people who were moving out of the city were neither very rich nor very poor. They were in between. The poor people could not afford to move to the suburbs. The rich people did not have to move, because the new freeways almost never came through their neighborhoods.

"If this keeps up, San Francisco will have only rich and poor people," the city officials said. "It will not be a real city. Downtown will be empty. Most of the people will live in the suburbs."

And they were right. Already some businesses and stores and factories were moving out of the city. "After all," their owners said, "that is where most of the customers and workers will be."

But still the wrecking crews went on clearing land for more freeways. People had other things to worry about. "Maybe

it will not be so bad," they said.

Then something happened that made the people of San Francisco go into action.

A huge double-decker freeway began to be built along the waterfront of the city. As the concrete freeway began to stretch its way along a wide avenue called the Embarcadero, everyone suddenly realized that it would block their view of the bay!

It would almost be like being in a prison with walls of concrete all around.

"NO!" cried the people of San Francisco. They wrote letters to the newspapers. They wrote letters to city officials. They formed committees. They signed *petitions*. They organized groups to protest. They *picketed* the freeway workers. Almost the whole city, in one loud voice, shouted "NO!"

The freeway was stopped. It would not be completed.

But what was to be done? There was still a problem. The city had been built for fewer people. Once almost everyone had lived near where he worked. People walked wherever they wanted to go. The streets had been designed for buggies and horse carts. Later, streetcars carried people about the city. But now there were so many more people. And almost all of them had cars. What could be done?

Groups of officials and citizens met together. They talked. They argued. They argued some more.

But they agreed on one thing: A city that is nothing but a crisscross of freeways is not a city. Some American cities, they knew, were already 70 percent highways. They did not want that to happen to San Francisco. They agreed that they wanted to save their city.

They also knew that in the United States, people are free to make choices. They should live where they please. They should work where they please. They should use any kind of transportation they please. The citizens and the officials said, "We must make sure that San Francisco remains a pleasant place to live and work in. To do this we must offer people more choices of transportation."

Then the people of San Francisco did an unusual thing. They voted to tax themselves for the cost of a whole new transportation system. Because the people of San Francisco had faith in their city, the new system is being built today.

The system is very modern. It includes many different kinds of transportation.

The most important part of the system is electric trains that run on tracks. They run underground. They run on the ground. They run above the ground on elevated tracks. They are very fast. They will carry people around the city faster than cars do. They are air-conditioned and have soft carpets and comfortable seats.

During the busy times of the day, the trains will run just ninety seconds apart.

This map shows part of the route of the new transportation system. The system will serve thousands of people who live in San Francisco and across the bay.

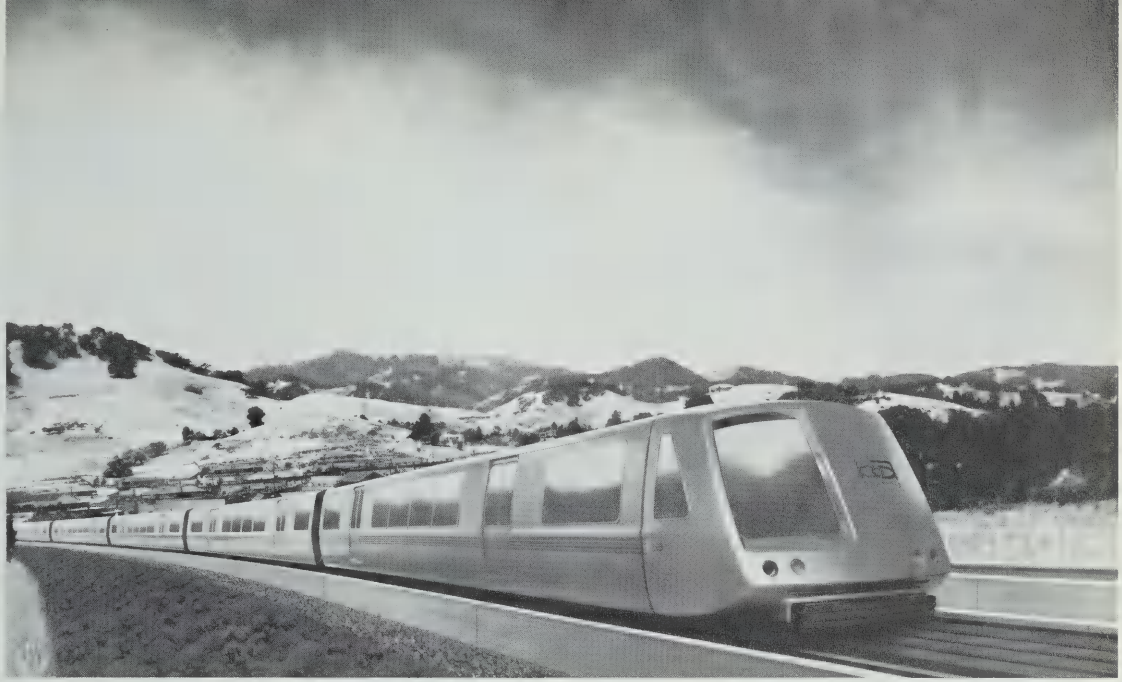
They will save people time. They will save people money, because riding in them will be cheaper than driving a car every day. And riding the trains will be much safer than driving on the freeways. Giant computers will operate the trains. The trains will never run into each other as cars do.

Buses will collect people in the suburbs and take them to large stations where they can catch the fast trains. Buses and even moving sidewalks will deliver people to their places of work in San Francisco when they get off the trains.

The new transportation system for San Francisco will include boats and ferries in the bay and helicopters in the sky. In the new transportation system there will even be a place for the old cable cars on the steep hills. They will remain important. They will help to carry people from their homes to their places of work.

When more people choose to use public transportation, there will be more room for trucks and buses on the freeways. The people who choose to drive their cars will be able to drive more safely.

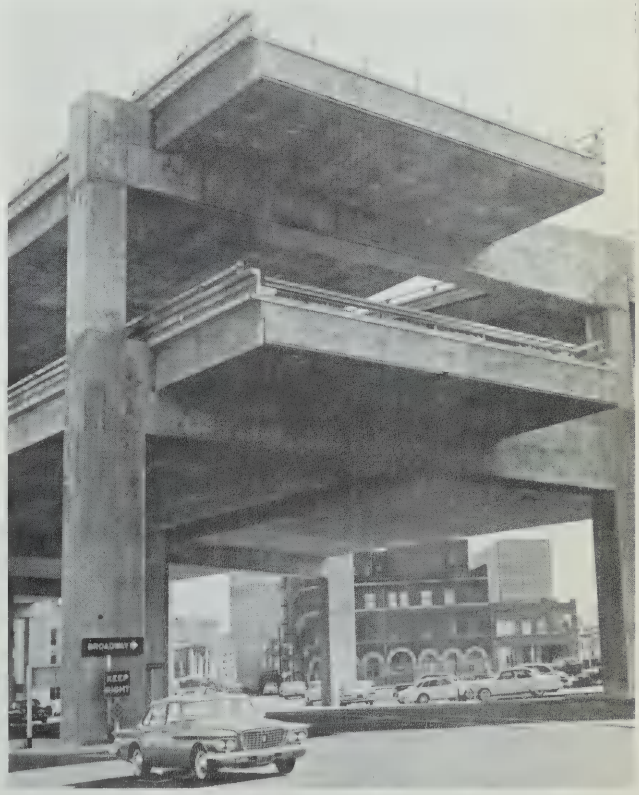
Fewer freeways will have to be built. Engineers are even making plans to put freeways underground. There will not be so much noise from traffic. The sky will be more clear of smoke from cars. The bright green parks will not be turned into highways and parking lots.



These trains will be the most important part of the new transportation system.
Sleek, swift trains like this one will soon speed passengers to and from San Francisco.

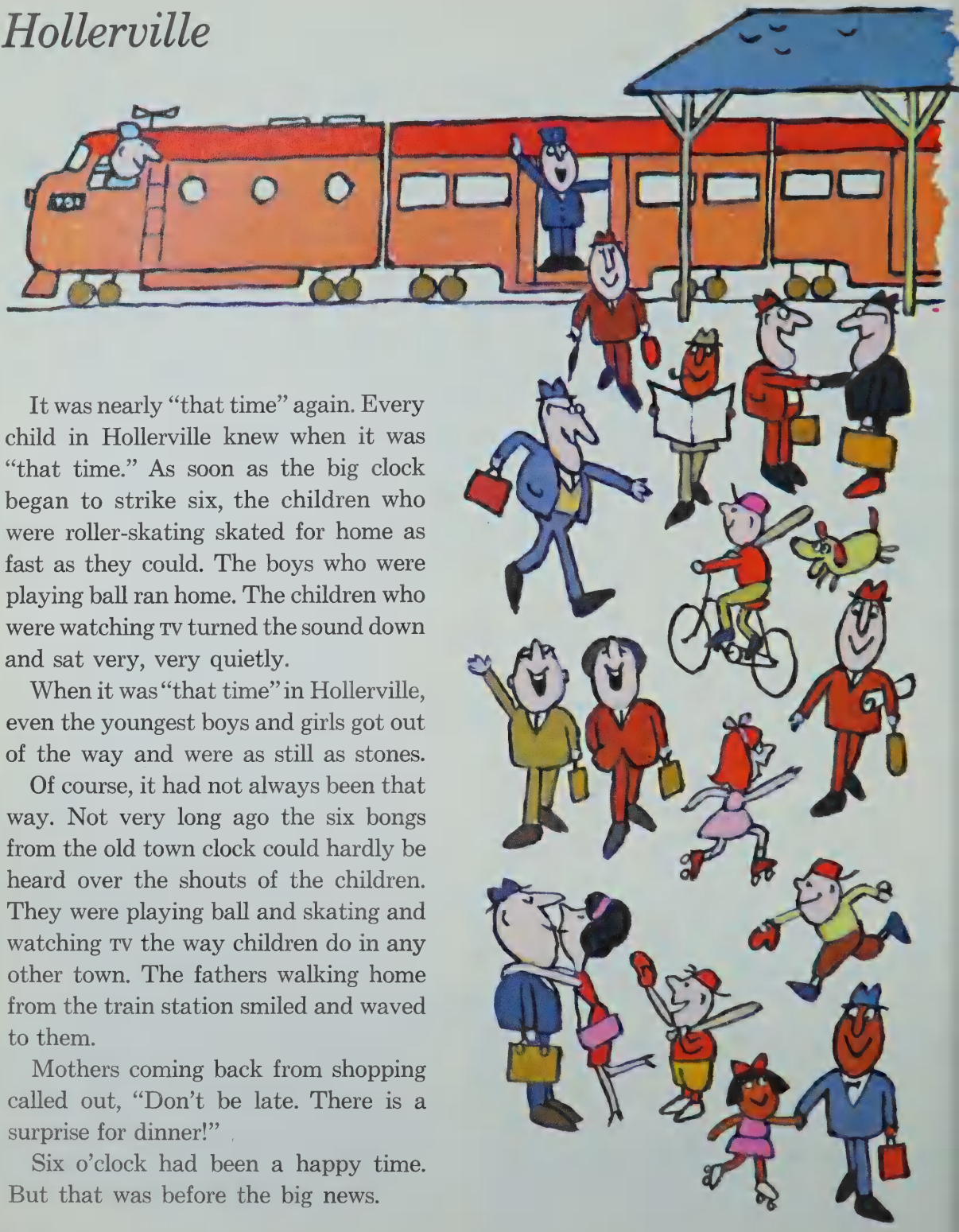
There are still many problems to be solved. But the people of this city are not afraid of problems. If you go to San Francisco today, you can still see the huge Embarcadero Freeway along the harbor. It has never been completed. It seems to say: *A city is for people!*

Fast trains will offer people greater choice of transportation. Fewer cars will be driven downtown.



Part of the Embarcadero Freeway.

Hollerville



It was nearly "that time" again. Every child in Hollerville knew when it was "that time." As soon as the big clock began to strike six, the children who were roller-skating skated for home as fast as they could. The boys who were playing ball ran home. The children who were watching TV turned the sound down and sat very, very quietly.

When it was "that time" in Hollerville, even the youngest boys and girls got out of the way and were as still as stones.

Of course, it had not always been that way. Not very long ago the six bongs from the old town clock could hardly be heard over the shouts of the children. They were playing ball and skating and watching TV the way children do in any other town. The fathers walking home from the train station smiled and waved to them.

Mothers coming back from shopping called out, "Don't be late. There is a surprise for dinner!"

Six o'clock had been a happy time. But that was before the big news.

"Have you heard?" all the mothers and fathers were asking each other. "The new superhighway to the city will be open next week."

"This will be the last week for us on that crowded train," said the fathers. "After this we'll be driving to the city. Why, you can drive sixty miles an hour all the way on that new superhighway."

"We had better get a second car," said some of the mothers. "Then we can drive into the city to shop."

"I can hardly wait," laughed one of the mothers. "Why, think of it, no more waiting at the train station! Just hop in your car and whiz into the city to buy a new dress or hat!"

Some of the fathers frowned when they heard that. Then they thought about how nice it would be to drive to work. And they smiled.

The new superhighway opened. That morning every father in Hollerville drove to work. That morning every father in every town along the new superhighway drove to work.

That afternoon almost every mother in Hollerville drove into the city to shop. That afternoon almost every mother in every town along the new superhighway drove into the city to shop.

All day the superhighway was crowded with cars bumper to bumper from one end to the other.

People said, "This is awful."

"I could get out and walk faster than this."

"We'll be late for work," shouted the fathers.

"How are we going to get our shopping done?" complained the mothers.

Finally all the people from Hollerville and every town along the superhighway got into the city. Where could they park?

"The curbs are packed with parked cars," they said.

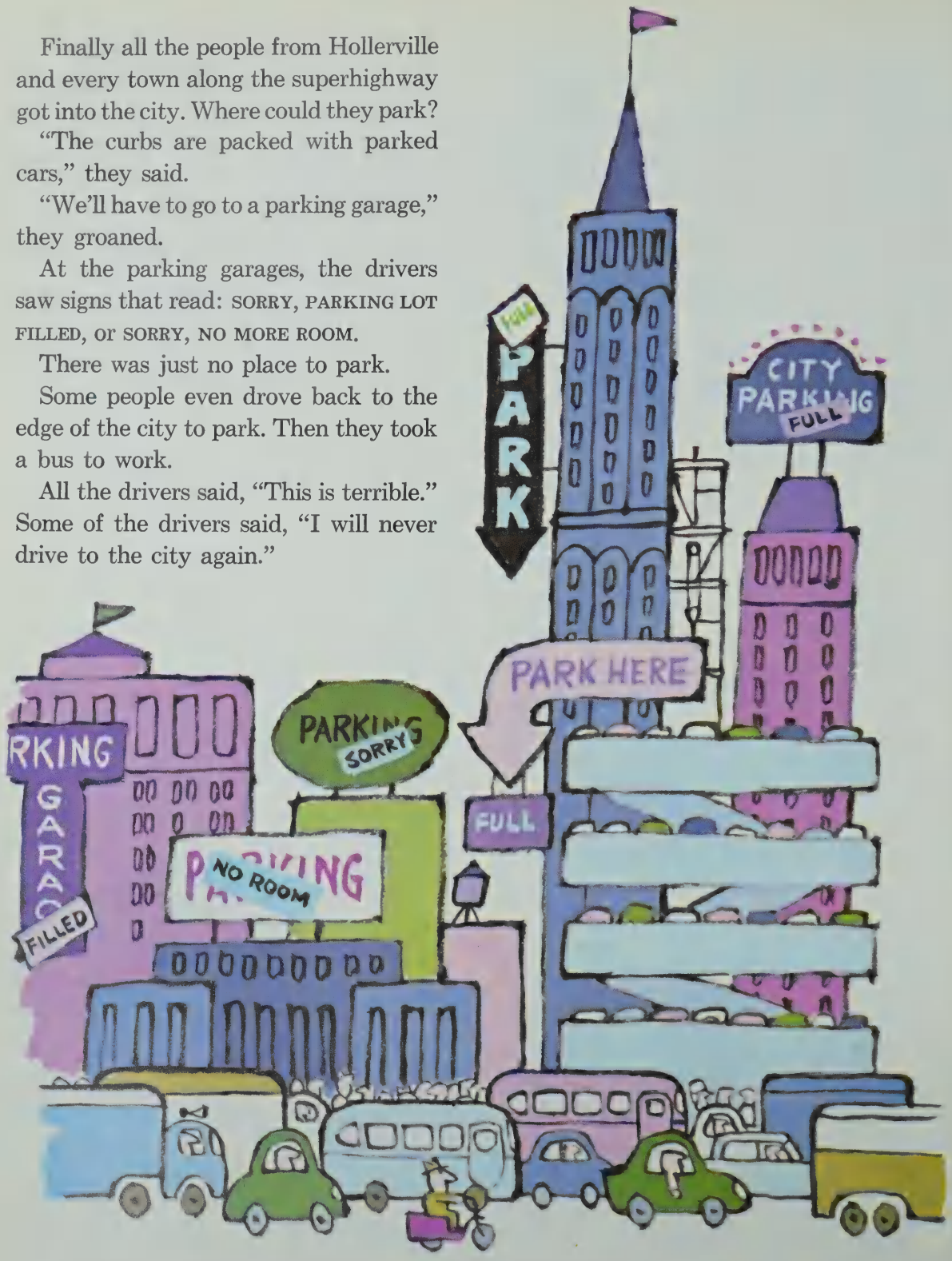
"We'll have to go to a parking garage," they groaned.

At the parking garages, the drivers saw signs that read: SORRY, PARKING LOT FILLED, or SORRY, NO MORE ROOM.

There was just no place to park.

Some people even drove back to the edge of the city to park. Then they took a bus to work.

All the drivers said, "This is terrible." Some of the drivers said, "I will never drive to the city again."



That evening when everyone started back to the suburbs, the traffic was even worse—if such a thing were possible.

When the big clock began to strike six, the boys and girls of Hollerville were playing ball and skating and watching TV just as they always had.

Honk, honk! The fathers driving home from work tooted their car horns in anger. "Watch out with that ball!" they hollered. "Hey, you kids on those skates, get out of the street! Do you want to get run over?"

The mothers driving back from shopping in the city shouted, "Get those things out of the driveway! Get into the house!"

And mothers and fathers together said, "Turn down that TV! We have had enough noise for one day."

That evening in Hollerville was not a happy one. The mothers were cross and cranky. The fathers mumbled and frowned into their newspapers. Every child in Hollerville was sent to bed early that night.

Now all the children in Hollerville know when it is "that time"! When "that time" comes, even the youngest child runs for home. All the boys and girls stop playing and put their toys away and get very quiet, because...*Honk, honk!* Here they come. It's "that time" in Hollerville.

The City, Water, and Air

LESSON 11

When you are thirsty, you turn on the faucet. Fresh water fills your drinking glass right then and there. Do you ever think how wonderful it is to have water whenever you want it?

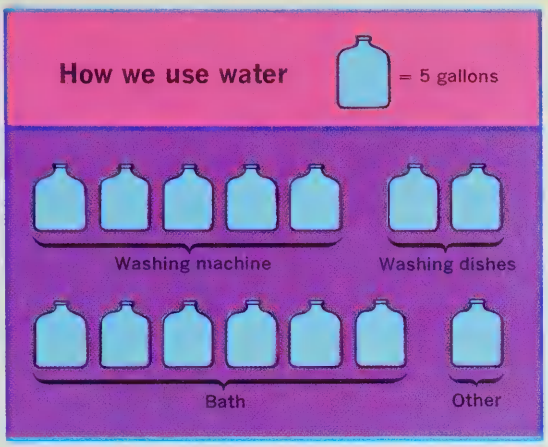
Sometimes you have to think about it. That might be when the plumber shuts off the water in your home so that he can make repairs. Or it might be when the mayor of your city speaks on television on a hot summer day: "There has been no rain for months. The water supply is very low. Please do not sprinkle your lawns. Please do not wash your cars. Please use water carefully."

The uses of water

Drinking is the first use we think of for water. Being even a little thirsty is not pleasant—being truly thirsty may mean dying. A person can live only a few days without drinking water. This makes water very important.

Even though water is important, it is cheap. For a few dollars a month, we can have water at home for cooking, watering grass, and for washing people and things. Each person in our country uses an average of 70 gallons, or two bathtubs full, every day.

That is not so much as you might think. A washing machine uses about 20 gallons to wash one load of clothes. It may take 10 gallons to do the dishes. A bath adds 30 gallons. Every time the toilet is flushed, 3 or 4 gallons of water are used. Add a few more gallons for drinking, brushing teeth, and washing



hands. In no time at all, 70 gallons of water have been used.

But all the homes in the country consume just a small part of the water used daily. Factories, farms, and power plants use more than fifteen times as much water as homes do. Factories use water to cool machinery and to help make goods. Farms use it to water dry fields. Power plants need water to make electricity. To live and work and eat and have light—we must have water.

Where we find water

More than half the earth is covered with water. The blue parts of our maps are far larger than the brown and green areas. It seems that they should certainly hold enough water for all of us.

But seawater is salty. We can swim in the seas or sail on them, but we cannot drink from them. Drinking salt water makes people sick. Salt water kills plants. It changes the soil. It eats holes in metals, so it cannot be used in machinery. We must look elsewhere for our water.

We can see from maps that there are lakes and rivers in most parts of our country. We can get fresh water from lakes and rivers. Whenever it rains or snows, more water runs into them. Rain and snow also help to fill the earth's underground storage places. The water in these natural storage places sometimes comes to the surface at springs.

Learning to move water

The first men could live only in places where they found fresh water. Later, men learned many ways to bring water to the places where they wanted to live. They dug huge ditches called canals to carry river water into their fields. They dug wells so that they could pump water from the ground. They made clay pipelines and stone *aqueducts* to carry water, and dirt dams to keep water from flowing away.

Today engineers use steel and concrete to build dams hundreds of feet high. From the dams, they build huge pipelines to carry water across deserts and valleys and along tunnels dug through mountains. With modern ways to carry and store water, men can live in cities hundreds of miles from the sources of fresh water and still have all the water they need.

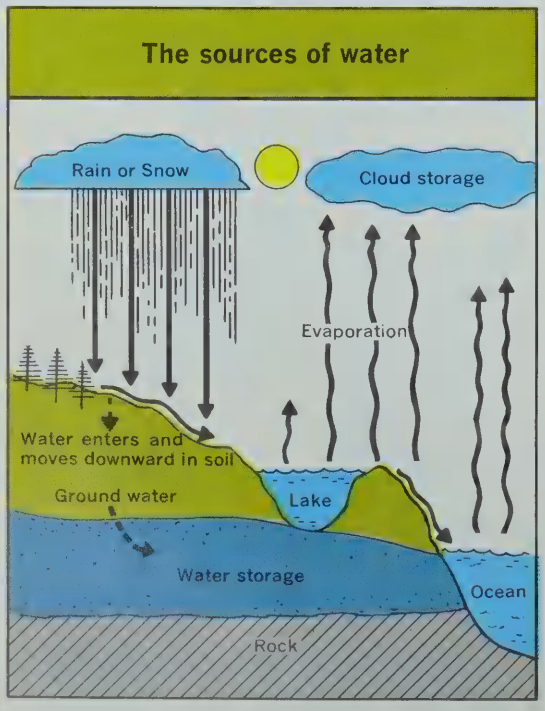
The competition for water

One way man loses water is by *evaporation.* When water evaporates, it goes into the air. Some of the water in our lakes and rivers is always evaporating

into the air. Much of the rain that falls on the earth evaporates before we can use it. More than half the water used in irrigation evaporates before it can sink into the earth.

Sometimes plants are man's rivals. There are trees and plants that drink great amounts of water. Many of these plants are of little use to man. They use up water needed by men. They use up water needed for plants and trees that men find more useful.

Much water is wasted because of *erosion.* Wind and water carry away the topsoil of the land. There are not enough trees and plants on the land to hold the topsoil. The land cannot hold rainwater. The water just runs off into streams and down to the sea.



Man, water, and pollution

Man's worst enemy in his need for water is man himself.

At one time in our country, the towns along the rivers and lakes were small and far apart. The people of the towns could dump their wastes into the rivers and lakes. The rivers and lakes cleaned themselves. Worms, fish, snails, and plants are nature's cleanup army. Today cities have grown so large that plants and animals cannot clean up the wastes cities pour into the rivers and lakes. Poisons in the water have grown so strong that plants and animals are dying. Making water unfit to use is called *pollution.*

Factories dump chemicals, dyes, dirt, and boiling water into rivers. City sewers dump wastes from kitchens, laundries, and bathrooms. Oil and trash from boats pollute the water too.

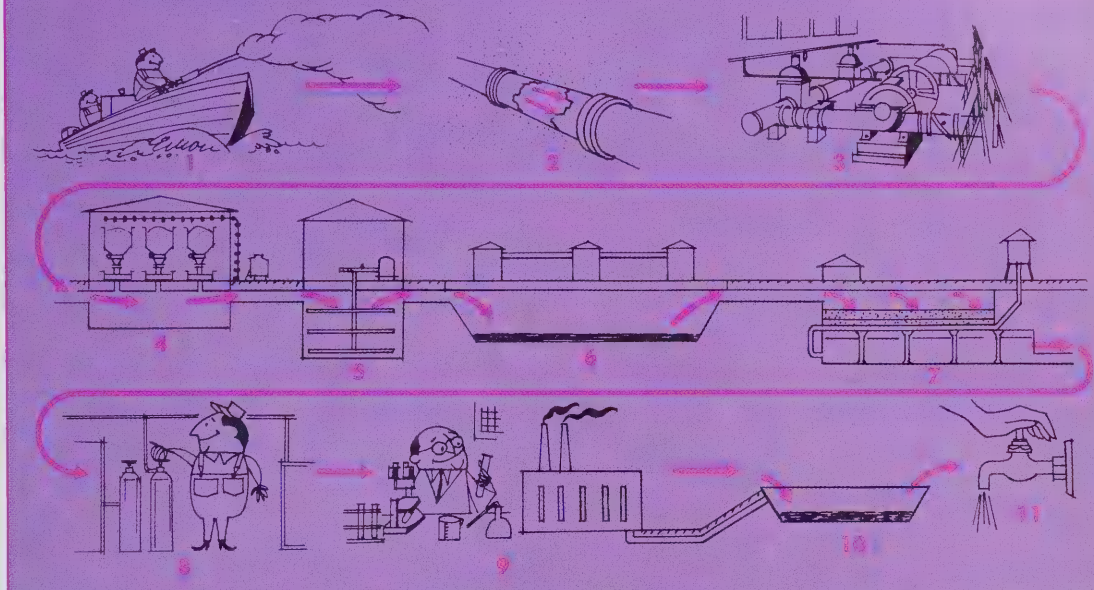
Getting water to the people

Many specialists, tools, and machines are needed to supply a city with water. Supplying the city with water is the job of the water company.

The water company gets water from a lake, river, or underground storage place. For some cities, the water is close by. For others, it may be miles away.

When water gets to the city it must be cleaned. *Filters* strain the water. Chemicals are used to clean the water. A tiny amount of chlorine can make thousands of gallons of water safe to drink. In many parts of the world, water

Some of the ways water gets to homes



A lake or reservoir is chemically treated for impurities **(1)**. The water **(2)** is pumped to the water treatment plant **(3)**. More chemicals are added to the water to kill bacteria **(4)**. The chemicals are mixed into the water **(5)**. The water moves into basins where impurities sink to the bottom **(6)**. The water is filtered through sand and gravel **(7)**. Chlorine is added **(8)**. The water is tested **(9)**. The water is moved to tanks or reservoirs **(10)** where it is stored until it is ready to be used **(11)**.

is not carefully cleaned. People who drink it may get diseases.

After the water is cleaned it must be moved into the homes and factories that need it. To do this, the water company uses pumping equipment. This equipment pushes the water through the water pipes under the streets and buildings. In this way water comes to the faucets of homes and factories.

The city water company must store extra water in *reservoirs*, or tanks. Sometimes there are months when very little rain falls. The city's water supply may get low.

The city stores water in wet months so that it will have water in dry months. People need more water in a dry season than in a wet season. The water company must have enough water saved to cool off a dry, thirsty city. It must have enough to fight any fires that break out.

It costs a great deal of money to find, clean, and deliver water to all the homes,

offices, factories, and fireplugs where water is needed. So, water has a price. This price usually pays for the costs of building and running the plants, the reservoirs, and the offices of the water company. If the company is owned by businessmen, part of the price of water must pay them for the risks they take. But the owners of water companies have fewer risks than other businessmen. This is because there is usually only one water company in a city. There is no competition. Everyone has to buy from one company.

If two companies were supplying water, there would be twice as many plants, reservoirs, offices, and pipelines. But the city would not be using twice as much water. People would still use the same amount of water that they could buy from one company. The cost of the "extra" company would be a waste.

Because water is necessary to everyone and because so many savings are needed to build a water plant, most city water companies are owned by the cities. They are run by city officials.

In the cities where water companies are owned by businessmen, the state government usually decides how much the businessmen can charge for water. State officials also tell the businessmen how to build their plants, what services they have to give their customers, how to measure the water used, and many other things about their business. In most states, state public health officials make sure that all water companies deliver clean, safe water to their customers.

A water company that plans carefully for the future builds bigger plants, reservoirs, and pipelines than it needs. A great amount of savings is needed to build such a water system. As the city's need for water grows, the water company can easily put more water into the system. The company does not have to spend much more money to supply the extra water when people need it.

Growing cities need more and more water

All over the country, specialists are studying how our growing cities can have the water they need.

One way of being sure is to stop polluting rivers and lakes. Many laws have been written against the dumping of wastes in our rivers and lakes. Better ways of getting rid of wastes must be found. Scientists and engineers are working on this problem.

Many specialists are working on ways to take salt out of seawater. There are already some "freshwater factories" where seawater is being changed into water that can be used. But the way this is done is expensive. Scientists are looking for cheaper ways.

In some cities where there are no *water meters*, plans are being made to start using meters. Meters measure the amount of water that people use. Water planners believe that people use less water when a meter is counting up their

water bill. Some water planners say that the price of water should go up when people use too much. Then users would be more careful.

Water that has been used in factories can be cleaned and used again. In this way factories use less water.

In factories, much water is used to cool machines. Engineers are now working on new machines that can be cooled with air.

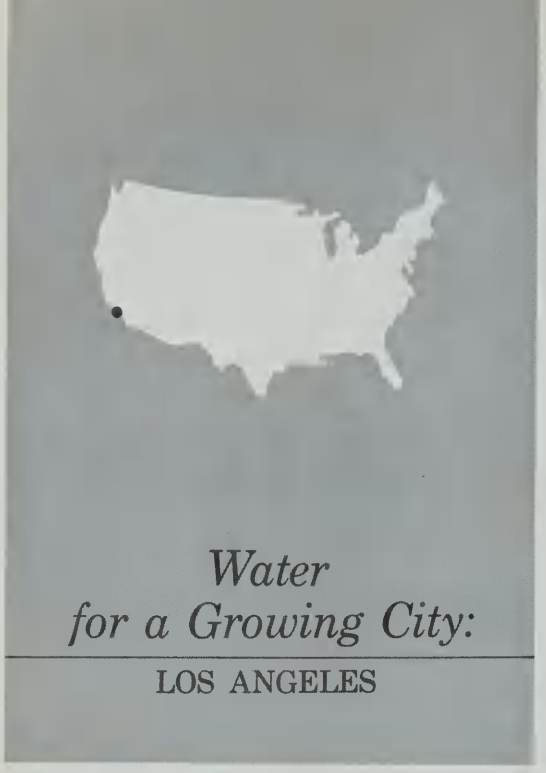
To fight evaporation, scientists and engineers have the idea of spreading a layer of chemicals over lakes, reservoirs, and canals. The film would hold the water down so that none would be lost into the air.

Many scientists are working on ways to make the rain clouds give up the water they contain. Then we can fill our reservoirs with rainwater whenever we need it.

Many cities that have used natural underground storage places are trying to save them for the future. They are pumping water into these storage places during wet seasons. Then they have water to pump out when the city needs it.

Some cities near the sea have found that seawater leaks into their underground storage places if they do not keep them full. The salt water ruins all the fresh water in the storage places. To stop the leaks, some cities pay back the fresh water they borrow from the storage places.

The most unusual idea of all is to catch *icebergs*. They would be brought from the cold waters near the North or South Pole to our shores. As this frozen fresh water melted, pipes would carry the water into homes and factories. Someday when you are thirsty perhaps you may walk to the faucet and get a drink of iceberg!



Water for a Growing City:

LOS ANGELES

Los Angeles has everything—almost. It has wide, beautiful beaches and it has flowers all year round. It has sunshine and swimming pools. Movies and television programs are made there. Airplanes and rockets are built there. The city has fine universities, theaters, and art galleries. Famous authors, actors, musicians, and painters live and work there.

Los Angeles also has fame. People all over the world know about this city in the sun. Because so many people know what Los Angeles has, it is one of the fastest-growing cities in the world.

What doesn't Los Angeles have plenty of? Water.

Lakes dot the land in and around Los Angeles. But most of the water for this growing city comes from lakes and rivers far away.

Every year thousands of people come to live in Los Angeles. To take care of them, the city must have more and more jobs, houses, schools, roads, stores, and —most of all—more and more water.

Los Angeles has no great rivers or lakes to get water from. It is next to the Pacific Ocean, the largest body of water on earth. But the ocean is salty. Drinking salt water makes people sick. Using salt water in factories ruins metals and machines.

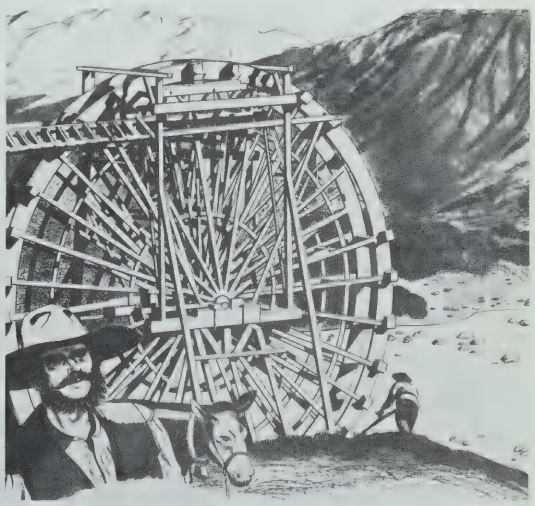
Los Angeles does have one river. It runs underground. Its water is clean and fresh. But it does not have enough to supply millions of people.

And yet water splashes in park fountains. It fills swimming pools, cooking pots, and glasses. It cools air and machines. It washes people, pets, and cars.

Where does all this water come from? The ships in the harbor unload oil, not water. Thousands of trucks and trains bring in food, materials, and goods of all kinds, but not water.

Los Angeles has had to work hard to find water. The search for water began two hundred years ago. Then the Los Angeles River gave water to the Spanish settlers in the small village of *Nuestra Señora la Reina de los Angeles*, which means Our Lady the Queen of the Angels. Willow trees stood along the banks as the river ran down to the sea. The water was clean and fresh. Only a small part of the river flowed above the ground. Most of it ran underground. The farmers around the village built a dam. They dug long ditches to carry the river water to their fields. As farms and houses were built farther from the river, water was carried in a pipeline of hollowed logs. The water was lifted into the pipe by a wheel that looked like a Ferris wheel.

The growing town of Los Angeles



Early settlers used waterwheels in the Los Angeles River to supply the city with fresh water.

let a few businessmen form a water company to distribute water. This private company served Los Angeles for many years. But as the town grew into a city the private water company could not provide enough water for the needs of the city. The city bought the private company. City officials still take care of the distribution of water today.

The officials of the city water department saw that the water from the Los Angeles River was not going to be enough for a big city. But there was no other source of fresh water close by. Los Angeles would have to stay small. It would stay small enough to get along with just the water in the river.

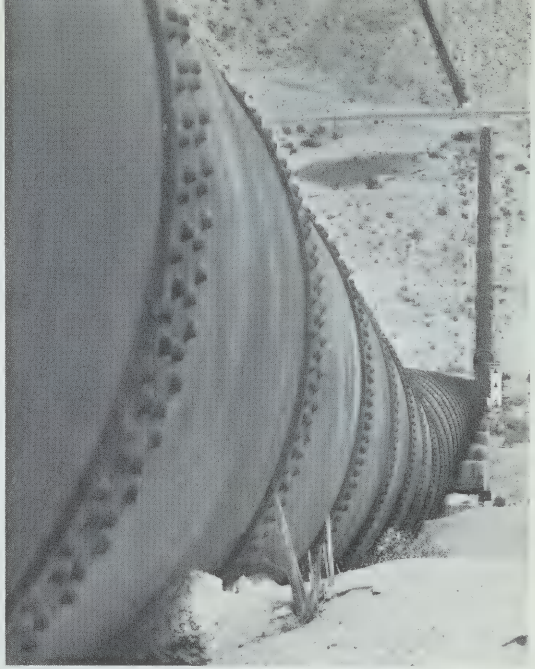
The people of Los Angeles wanted their city to grow. They decided to bring in water from the High Sierra. These mountains were over two hundred miles away! There rushing streams carried melted snow into the sparkling lakes of the Owens Valley. There was plenty of water in the valley, especially in Owens Lake.

The city borrowed $25 million from banks, businesses, and private savers. Part of the money was used to buy most of the land in the Owens Valley. This gave Los Angeles the right to use the water in the valley. Part of the money was used to build the longest aqueduct ever built.

The Los Angeles–Owens River Aqueduct brings water to the city from the snowy High Sierra.

For five years, five thousand men worked to build the aqueduct from the Owens Valley to Los Angeles. They labored across mountains, valleys, and deserts. When the Los Angeles–Owens River Aqueduct was finally finished in 1913, the people of Los Angeles were sure they would always have enough water.

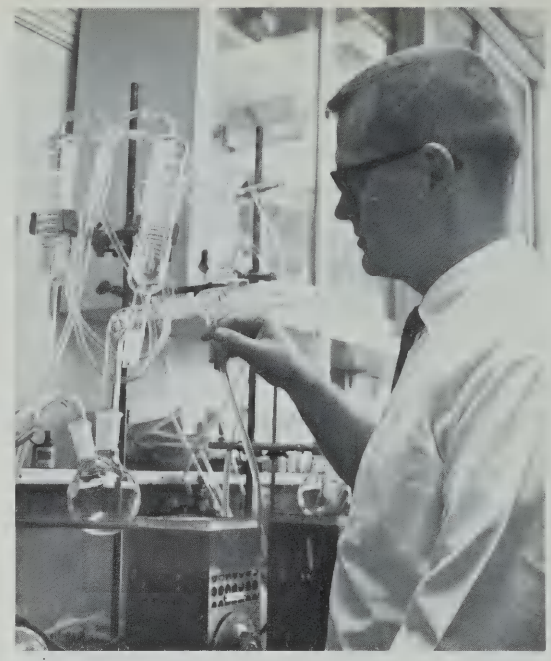
The sun shone on the City of the Angels. It shone more than ever before. There was a *drought*. The dry land of the farms and orange groves around Los Angeles needed more and more water. Factories and homes needed more and more water for drinking and cooling. The farms in the Owens Valley needed more water too.



The Los Angeles–Owens River Aqueduct sometimes becomes a huge steel pipeline as it crosses mountains and deserts.

Owens Lake in the High Sierra—dried up by thirsty cities and farms.

A Colorado River pumping station lifts water over mountains. Water in the Colorado River Aqueduct also crosses the desert in its long trip to Los Angeles.



A city engineer tests Los Angeles water to see if it is clean and safe.

As the city took more water from the lakes and rivers of the Owens Valley, the farmers there became very angry. A long fight began over the use of the water. The great aqueduct was dynamited several times by the farmers. Finally the city bought all the farms in the Owens Valley. The fighting stopped.

Los Angeles kept growing. There was not enough water for Los Angeles in the Owens Valley. Los Angeles looked to the east again. The city joined with other thirsty southern California cities in planning a new aqueduct. This one would stretch three hundred miles to the Colorado River. Once again men worked through good weather and bad, across mountains and deserts, to bring water to the coast.

The Colorado River Aqueduct began to deliver water in 1941. In that year the United States entered World War II. During the war years thousands of people came to work for the airplane factories and military bases in and around Los Angeles. After the war most of these people stayed. Los Angeles had become one of the world's largest cities.

The water planners of Los Angeles had done a good job. Then and now, the city's millions have the water they need. When a glass is filled with water, the people of Los Angeles may wonder where the water comes from. The best guess would be from the High Sierra, because more than half the city's water is from the Los Angeles–Owens River Aqueduct. About a fourth of the supply is from the Los Angeles River and from local wells. Almost a fourth is from the Colorado River Aqueduct.

Los Angeles has clean, cheap water because of careful planning. The city's engineers use chemicals to make the

Aqueducts Carry Water to California's Cities and Farms

Aqueduct water is used to irrigate dry fields.

water safe. There has never been a disease in the city from its water. The people who use the water pay only seven cents for a ton of it. Yet enough money is obtained at this price to pay the expenses of bringing in the water, purifying it, piping it into homes and factories, and paying back the savings that were borrowed.

Hundreds of people move to Los Angeles every day. All these people expect to have clean, cheap water whenever they want it. The city planners know this. They are looking ahead to the city's future needs.

Los Angeles has already started another aqueduct, which will bring even more water from the High Sierra. This aqueduct is called the Second Los Angeles–Owens River Aqueduct.

This is part of the new California Aqueduct. It is being built by the state government. Water from northern California will be used by Los Angeles.

The new Oroville Dam in northern California will be the largest dam in the California Aqueduct project. Water, electric power, and flood control will be provided.

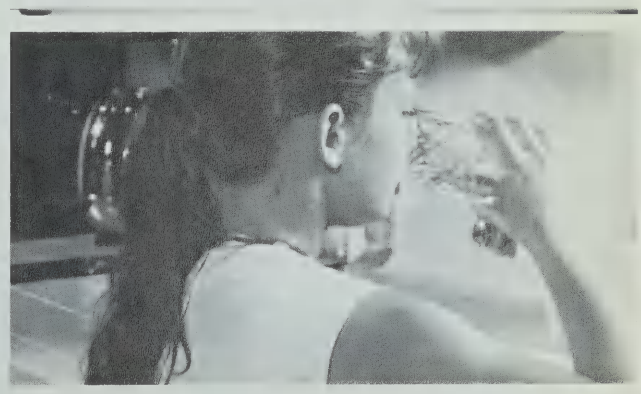
The state government of California is also building an aqueduct. It will be called the California Aqueduct. The state is moving water to the dry south from the north, where there is more than enough water. Dams in the north will supply power for electricity. They will also help to stop floods. From the reservoirs behind these dams, from the lakes and rivers, water will be carried hundreds of miles to thirsty southern California. The state plan is for the biggest water-movement system in the history of the world. Los Angeles will buy water from the California Aqueduct.

The Los Angeles planners think that the people of Los Angeles will be able to buy all the water they can use for the next hundred years. But the planners are thinking of the years beyond. They are working on cheap ways to remove salt from seawater. Then water from the great Pacific could be used. They are thinking of gathering icebergs and using them near the city like great frozen wells.

Nature did not give Los Angeles water. Man did.

This powerplant will supply power for electricity. It is being built beneath the Oroville Dam.

In this building, planners work to see that people have the water they need now and in the future.



The Beautiful Ohio

The Indians called it Ohio, "river beautiful to look upon." It flowed westward almost a thousand miles. It gathered smaller streams and rivers along the way until it joined the "Father of Waters"—the Mississippi. The lands the Ohio River flowed through belonged to the Indians. There were forests and green hills and wild animals along the banks of the clear blue waters.

Settlers came to the lands of the Ohio River Valley from the Colonies in the East. Fort Pitt was built where the Ohio River began. Settlers cut down trees and made farms. The river gave the settlers water for drinking. The river gave them water for their crops. The river gave them a way to take their crops to market.

Minerals were found in the Ohio Valley. Men began to mine them. Small industries began. Men made lumber, nails, flour, and glass. More and more people from the East, and from countries all over the world came to work in the Ohio Valley. Villages became towns, and towns became cities.

By the time your parents were born, millions of people were living on the banks of the Ohio and the smaller rivers that ran into it. There were hundreds of villages and towns and many cities like Wheeling, Cincinnati, Dayton, Indianapolis, Pittsburgh, Frankfort, and Louisville near the rivers.

The rivers gave life to the towns and cities on their banks.

The rivers gave people drinking water and water for their crops.

They gave electrical power to light lamps in homes and to run factories.

They were water roads for carrying goods and materials in barges and boats.

They did hundreds of jobs in factories such as cooling machines and cleaning raw materials.

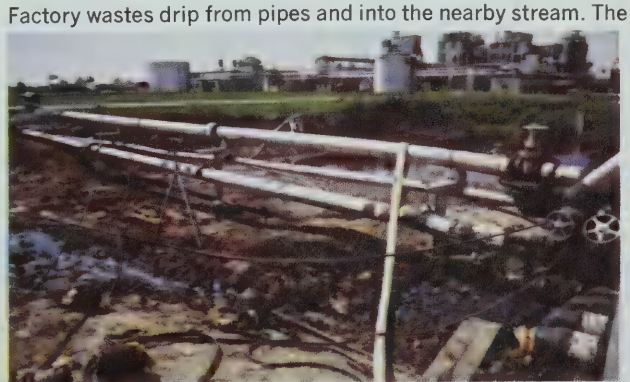
They gave people places to fish and swim and sail and relax.

The rivers gave all these things to people and, in return, people gave the rivers their trash. Factories dumped chemicals, oils, hot water, and dyes into the rivers. From farms, poisons used to kill insects ran into the rivers. Ships and barges spilled oil, gasoline, and garbage. City sewers collected kitchen and bathroom water from homes and dumped that into the rivers too.

The beautiful Ohio began to turn ugly. The clear blue water turned dark from all the wastes it carried along. Fish died. The water looked and smelled so bad that no one could swim in it. The water was dangerous to drink.

Many people in the Ohio Valley

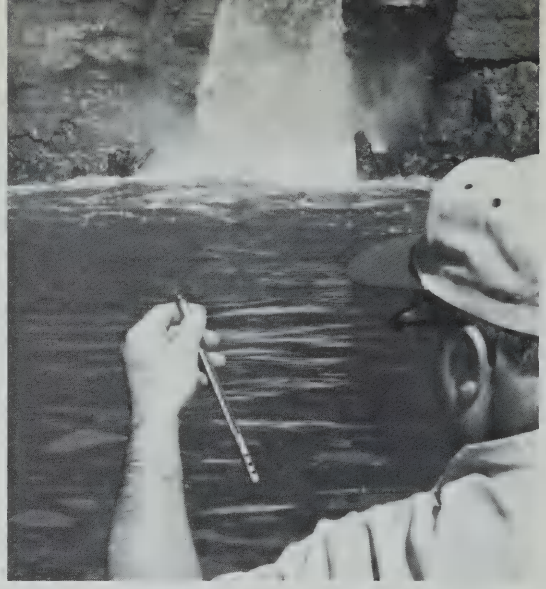
Factory wastes drip from pipes and into the nearby stream. The stream becomes polluted.



wanted to clean up the water. But how? The job seemed impossible. The Ohio River is fed by faraway streams. The streams pass villages, towns, and cities on their way to the river. Then the streams join the Ohio and the great river moves past still more towns and cities until it meets the Mississippi. As the water passes by city after city, it carries along the wastes of each city. One city alone cannot make the river clean again. The river could be saved only if all the people of the valley worked together.

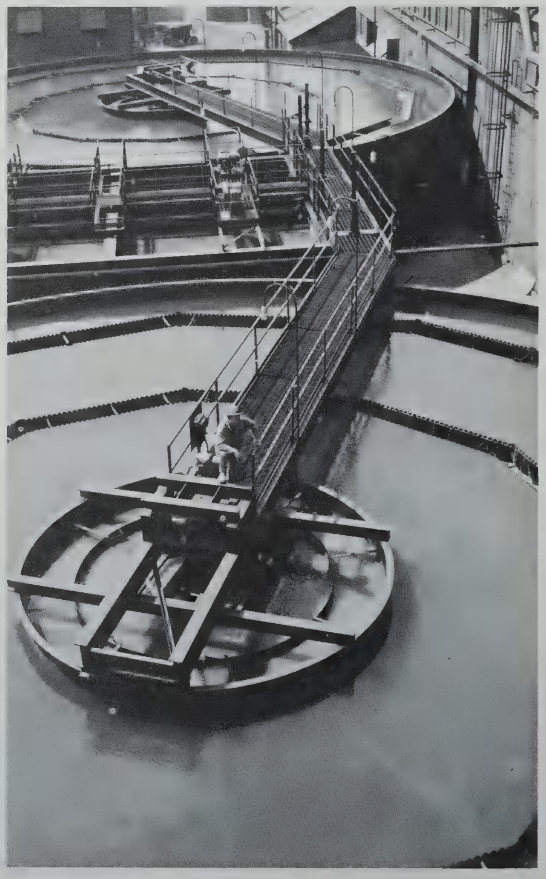
The rivers of the Ohio Valley run through the states of New York, Virginia, Maryland, North Carolina, Tennessee, Pennsylvania, West Virginia, Ohio, Kentucky, Indiana, and Illinois. Each state had its own taxes and laws and government. How much money should each state pay? What kind of laws would each state have to write to make sure its citizens stopped polluting the rivers? Who would do the work?

It was a big problem to get all the people to work together. After many years of discussion, the eight states of New York, Pennsylvania, Virginia, West Virginia, Ohio, Kentucky, Indiana, and Illinois signed an agreement. They created a new organization named the Ohio River Valley Water Sanitation Commission. It was called ORSANCO for short. Each state appointed three men to help run the new organization. Each state agreed to give ORSANCO money from its taxes. Each state gave money according to how much land and how



A specialist tests river water for pollution.

Wastes from a steel mill are treated here. The water goes back to the river cleaner than when it went into the mill.



many people in that state were near the rivers. This way of sharing the cost seemed fair to all the people.

ORSANCO specialists went to work all over the valley. They discovered the causes of pollution. They learned what each kind of pollution did to the rivers. They studied new ways to get rid of wastes. Most of all, they taught the people of the valley to care about the rivers. ORSANCO specialists made movies, wrote stories, sent letters, and made speeches. They told businessmen, city and town officials, and citizens what the loss of a river means. The specialists told the people what they could do to save the rivers. When people understood the danger, most of them wanted to help.

Factory owners in the valley looked for safer ways to get rid of wastes. They spent millions of dollars building equipment that would stop the flow of wastes into the rivers.

Towns and cities spent millions of dollars building *sewage plants* to treat wastes. The United States government gave ORSANCO money and advice. The rivers began to get cleaner.

In some places people were not willing to help. The officials of one town said that building a sewage plant was too expensive. The town went right on dumping dirty water from its kitchens and bathrooms and factories into the river. The towns downstream complained about the wastes floating past them. ORSANCO asked the state government to help. The lawmakers told the town it would have to pay a fine. The town would have to pay the state $1000 for every day it dumped wastes in the river. Soon the stubborn town was building a sewage plant.

The people of the valley knew that ORSANCO was succeeding when once again fishermen and swimmers and small sailing boats began to use the rivers. The rivers were coming back to life.

The work of ORSANCO goes on. Even when every town and factory on the river stops dumping, there will still be problems. A sewage plant may break down or a ship carrying acid may sink. ORSANCO has put *pollution detectors* all along the rivers. These machines test the water day and night. They tell ORSANCO when and where there is pollution in the water. Then ORSANCO can warn the towns and cities whose water is in danger. Specialists can go to the place where the accident happened and try to discover what went wrong and make sure that it does not happen again.

ORSANCO must go on studying the rivers. It must go on helping the people of the valley keep their rivers alive. Much money is needed to keep the ORSANCO program going. But it would cost far more if it stopped. If the rivers "died," all the towns and cities of the valley would also die. ORSANCO has taught this lesson well. Thanks to the care of the people who live on its banks, the Ohio River will not die. It will again be called "river beautiful to look upon."

LESSON 12

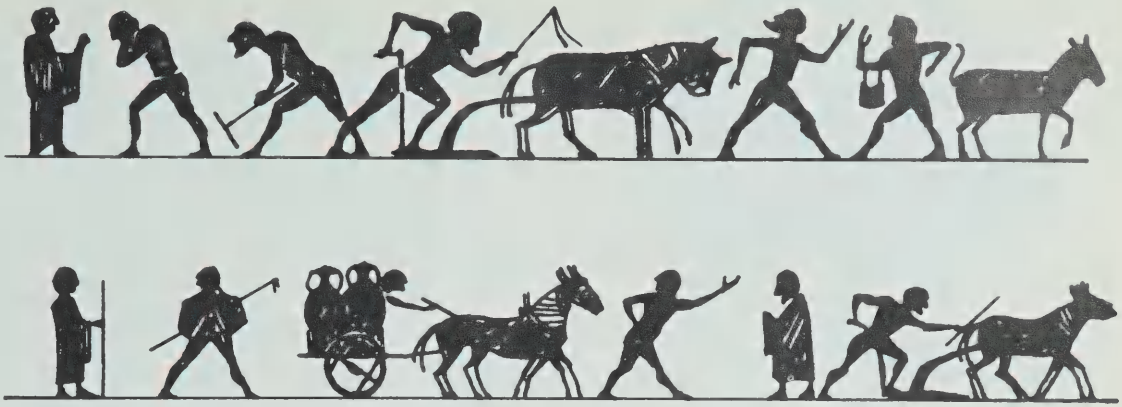
The Precious Gifts of a City:

ATHENS

People from all over the world visit the city of Athens in Greece. They go to see the beautiful temples and statues made by the people of Athens more than two thousand years ago.

Athenians of long ago loved their city. They could not imagine living anywhere else on earth. They also had many ideas about how people could live a good life in a city. Today we call that ancient time the Golden Age of Greece.

Athenians thought that a city should have enough people to protect it from enemies. The city should be small enough so that the citizens would all know each other.



Farmers hoe and plow their fields. Other farmers load big jars full of olive oil or wine onto carts.

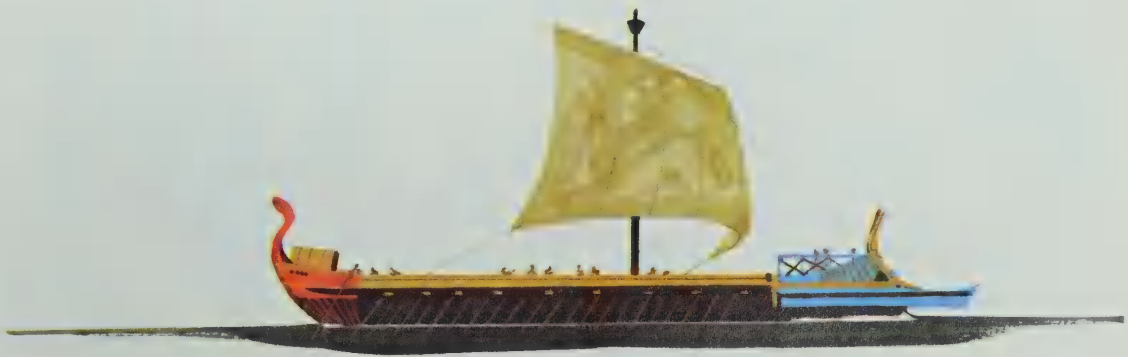
Athenians thought that all citizens should help to make their laws. They thought that citizens in a city should be free to talk about their ideas as they wished.

What did Athens look like in the Golden Age?

Athens and the farms around it were on a plain with mountains on three sides. The fourth side was open to the sea. The city was a few miles away from the sea, so enemy ships could not attack it. At the sea there was a fine harbor. The Athenians built a road between the city and the harbor. Walls were built along the sides of the road to protect the people and goods traveling on the road from bandits. Walls were around the city, too.

The harbor was Athens' gateway to the world. It was busy with merchant ships and ships of the Athenian navy. In those days there were few roads. Bandits often attacked travelers on the roads. Travel over the sea was faster,

A Greek sailing ship. Men rowed with oars for greater speed.



Museum of Fine Arts, Boston, H. L. Pierce Fund
This painting on a vase shows a boy fishing. It was painted about 520 B.C. Fish was important as food.

but it was not much easier. Ships had sails, but when the wind did not blow, men had to row them. Poor maps and pirates made sea voyages dangerous. Athens' navy helped protect the ships from pirates. But traveling was still dangerous because of sudden storms.

The houses of both rich and poor Athenians were built side by side. There were no lawns or sidewalks. Narrow, unpaved streets twisted up and down hills. The houses were of sun-dried brick with roofs of tile. The floors were of clay. Some of the better houses had floors made of pebbles set in mortar. Most of the houses were dark inside. They had few windows. But some houses were built around sunny courtyards. Light and air came in the houses through windows that faced the courtyards. Water was not piped to the houses. Some people had wells in their courtyards. Others had to carry water home from public fountains. Cooking was done over charcoal fires.

The part of the city in which there were many houses was crowded. But Athenians did not think their houses were as important as their public buildings.

The Agora

The Agora was a big open square in the center of the city. All important streets led to it. Around the Agora there were beautiful buildings and statues. To Athenians, the Agora was an important place.

The city council met in the Council House on one side of the Agora. Other city officials worked in other fine public buildings around the square.

Judges and juries listened to court cases in the open air. They decided if a person who had been arrested had really done something wrong.

In another part of the Agora, people worshiped in the temples or before the many altars.

This statue, made about 500 B.C., shows a woman grinding flour. Perhaps the statue was a toy.

One side of the Agora was for shops. Booksellers and barbers, potters, perfume sellers, sandal makers, and silversmiths worked in their open-front shops. Peddlers called out their bargains. Shoppers argued over prices. Slaves were sold. On market days, farmers spread out fruit, vegetables, honey, and eggs.

Men came to the Agora to meet friends or to listen to the wise men talk. They came to hear the latest news, get a haircut, or watch the craftsmen in their workshops.

Under the shade trees in the center of the Agora, crowds listened to speakers. Anyone could make a speech. Athenians liked to talk. They also liked to listen. Teachers held classes in the porches of the public buildings. The porches were comfortable places where people could walk and talk, summer and winter.

A painting on the inside of a cup shows a shopper in the Agora buying a vase.

In the Golden Age great thinkers, artists, and craftsmen lived and worked in Athens. The city was alive with people with new ideas.

Athenians exchanged ideas in open-sided buildings like this. Roofs protected people from bad weather.

In the Agora, men exchanged ideas about nature, government, and many other things. They got ideas about nature by looking at the works of nature and by thinking about them. Testing ideas was not as important to them. Most Athenians did not experiment to discover if their ideas were right. But some of their ideas about nature were right. For example, they believed that the moon's light comes from the sun.

Some of their ideas were wrong. For example, they thought that everything is made of earth, air, fire, and water. Many Athenians also thought the earth was like a big plate. Around the edge, they said, was the river called Ocean. The sun, moon, and stars moved over the earth and under it.

Even though some of their ideas were wrong, Athenians were good thinkers. And they admired men who could discuss ideas well.

Pnyx Hill

It was a short walk from the busy, noisy Agora to Pnyx Hill. Here in the open air, Athenian citizens, rich and poor, met to discuss new laws and vote on them.

The Acropolis

High above Pnyx Hill and the Agora was the Acropolis. This steep, rocky hill could be seen from any place in the city. Long before the Golden Age, kings had ruled Athens from a palace on the Acropolis. The palace was gone. Now the

Museum of Fine Arts, Boston, Francis Bartlett Fund

This vase picture, painted between 500—490 B.C., shows a carpenter finishing his work on a chest.

Museum of Fine Arts, Boston, H. L. Pierce Fund

In the Agora a butcher boy helps a butcher cut meat. This vase was made about 500 B.C.

Athenians chose their leaders. In the Golden Age they chose a great leader named Pericles.

Pericles urged the people of Athens to build fine temples on the Acropolis. Many of the temples were built for Athens' own special goddess, Athena. She was the goddess of wisdom, of crafts, and of the arts. Athenians believed she watched over their city and protected it. They believed that Athena had given them their first olive tree. Olive trees were important to the Athenians. The olive trees gave them food, oil for their lamps, and a good that could be traded to other cities.

The finest builders were hired to build the temples. The finest sculptors and artists were hired to decorate them. Athenians could look up and see the beautiful marble temples against the sky.

This is a silver coin of old Athens. One side shows the head of Athena. The other side shows her sacred owl and an olive branch.

The Metropolitan Museum of Art, Gift of Edmund Kerper, 1952

Two young Athenians are given lessons in poetry and music. This drawing is taken from a cup made about 485 B.C.

Athena

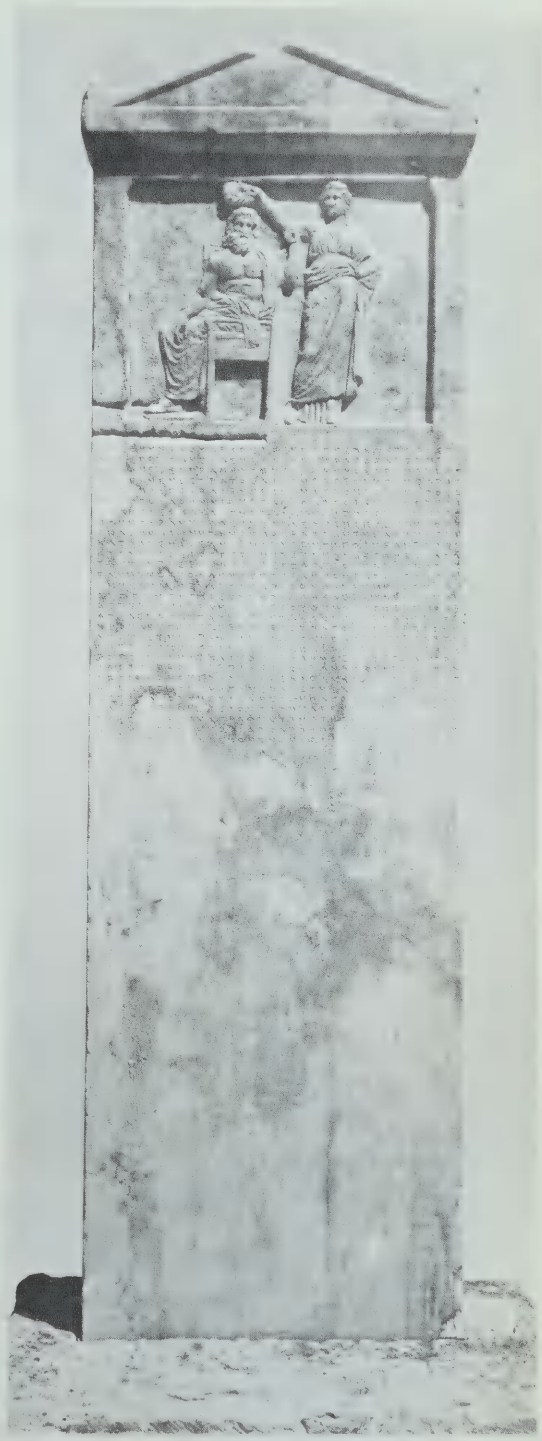
The temples seemed to say, "Be wise as Athena is wise. Do your best to serve beauty and truth. Be strong." The people answered in their hearts, "With Athena's help, we will make Athens a good city."

The city had many places for festivals, contests, and parades. These events were held in honor of Athena and the other gods Athenians believed in. For weeks before a festival, boys and girls trained for the sports events and the ceremonies. Actors, singers, and dancers practiced their parts for plays in the city's theaters. Visitors came from the country and from other cities. The festivals made the city exciting.

Just outside the city walls were the *gymnasiums*. They were set in groves of trees near streams. Here the young men ran, wrestled, and played ball. Here they trained for contests and for war. Here they met with teachers of music, poetry, and public speaking. Here they listened to singers, poets, great leaders, and wise men. Everyone returned to the city wide awake in mind and body.

What made Athens special?

Today we think of cities as places. But Athenians thought of their city as people. They loved Athens because of the people who had lived there and who would live there in the future. Their fathers and grandfathers had been brave. They had brought honor to the city. Men wanted their sons to be brave



A law against tyranny written in marble. Athenians wrote this law to protect democracy in Athens.

A shield is carefully polished in an armor shop. A helmet, shin guards, and some tools hang on the wall. Vase painting, about 480—470 B.C.

Museum of Fine Arts, Boston. Francis Bartlett Fund

and bring honor to Athens. They taught their sons to do their best for the city.

Athenians of the Golden Age shared many things with each other. They shared ideas, sports, songs, the theater, and the love of their city. They all shared in the enjoyment of their public buildings.

Athenian citizens made their own laws. They respected these laws. They were proud that they were ruled by law, and not by a king who told them what to do.

How free were the Athenians?

Athenian citizens had more freedom than any other people in the world then. The citizens ruled, but they also had to obey.

The city could order them to fight in a war. It could order shopkeepers to measure and weigh goods honestly. It could order people not to send certain foods out of the city. The city could also force grain prices down. When a merchant sold grain at too high a price, the city sold grain cheaply from its

warehouses. Then the merchant had to bring his price down too. If the people thought a leader was growing too strong, they could vote to order him out of the city. Even the highest leaders of the city could be forced to obey.

Athenians believed that when everyone obeyed the laws, everyone had more freedoom.

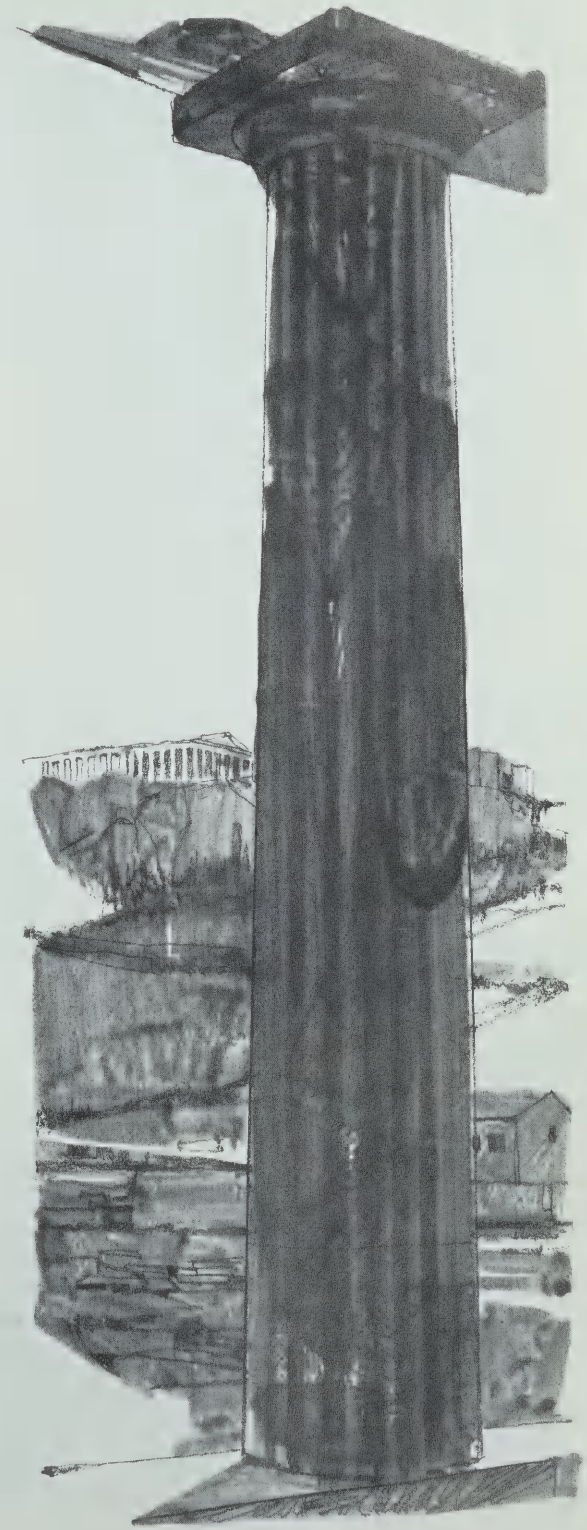
How did the Golden Age end?

Athenians developed and loved the idea of freedom. But they did not share freedom with other cities. Athens made other cities pay money to Athens to keep the seas safe for trading. When some cities wanted to stop paying, Athens would not let them. Athens would not let the trading ships of other cities go where they wanted. War between Athens and other cities began. It went on for many years.

Many Athenians disliked war. Some of the great plays in their theaters told the Athenians that war was wrong. Many people said that war would ruin Athens.

The enemies of Athens attacked the city. Suffering grew in Athens. Many Athenians lost their lives. The soil of the Athenian countryside was ruined. The slow-growing olive trees were burned down. Athens' navy was destroyed. Athens lost control of the sea routes to her food supplies. The city became poor.

In the hot tempers that war brings, the wise Socrates, the great lover of freedom, was put to death. The Golden Age came to an end.



LESSON 13

The City That Swallowed Villages:

LONDON

London, England, is one of the world's big cities. It is a great world port on the Thames River. It is one of the biggest centers in the world for borrowing and lending money.

London is an old city. It was founded by a Roman general and his officers about 1500 years before Columbus discovered America. During its two thousand years, London has suffered wars, *plagues*, and great fires.

How could a city that has gone through war, plague, and fire be a great world city today? How could a Roman general two thousand years ago choose a good spot for a modern city? The Romans

Ancient London on the Thames River. The Romans called the town Londinium.

knew nothing of the trains, big ships, and jet airplanes that were to come.

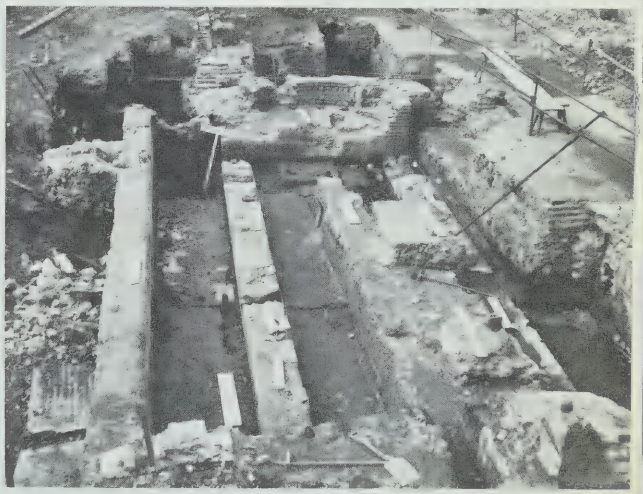
Roman soldiers started other towns in England. Many of them are only ruins. They are only broken stones in fields where sheep quietly nibble grass. Others are busy English cities. But only London is a giant city.

What was so good about the location of London? Why did it grow?

Can you see the Roman soldiers landing on the shores of a wild, wooded island? They march through the trees until they come to a big river. Wide swamps make the river too hard to cross here. The soldiers march for fifty miles up the river. At last they find gravel beds along the banks of the river. Here they can cross. The soldiers find two gravel hills on the north side of the river. The Romans decide that this would be a good place to stay. One hill could be a lookout. On the other hill, they would build a town. They would build a bridge across the river here.

Today the oldest part of the giant city of London stands on the spot the Roman soldiers chose. But the old Roman town cannot be seen. For two thousand years dirt, rubbish, stones, ruined houses, broken streets, and crumbling walls have piled up over the Roman town. Now it lies twenty feet below the surface of the ground.

The ruins of a Roman temple were found in London after World War II.



People call this oldest part of London the City. The City has been the business heart of London for hundreds of years. Banks, insurance companies, business offices, and big London newspapers are

here. So is the Tower of London, where the jewels of the royal family are guarded.

When the Romans were here, they built roads from London to the north, east, south, and west of the island. The Romans liked long, straight roads. These roads were so well planned that the heavy traffic of the big city moves along them today.

After a time the Roman soldiers left London. They were needed back in Rome. Years passed. Fierce warriors called Angles and Saxons came from across the sea. They conquered the island and called it England. Hundreds of years passed. Then Vikings from Denmark attacked England. In time many of these Vikings settled in England.

The Tower of London in the early 1400s.

All the people who came after the Romans left also thought London-town was in a good spot. It was the best place to cross the river. Ships from the ocean could tie up along the riverbanks at the edge of town.

Not long after the year 1000, an English king decided to make London the center of government. He chose a

Trading ships crowd into London's busy port on the Thames. This picture was drawn in 1616.

lonely island in the Thames River—about two miles west of London.

The king built a great hall and a great church. Here the city of Westminster was born. Two miles of river and marshy land lay between Westminster and London. From now on, London would have two centers. One would be the City, the center of business and trade. The other would be Westminster, the home of the royal court and the government of England.

In 1066 the Normans swept into England from France. The Normans conquered the English. Strong Norman kings then ruled the land.

When England was at peace, trade could grow. The Londoners built up their port. They built a fine church called St. Paul's. They built a good stone bridge, called London Bridge, over the Thames.

When England was at peace, London could spread out beyond its walls. People built houses along the main roads leading from the city gates. These Londoners were the first people in Europe to live in suburbs.

When England was at peace, large flocks of sheep could graze over the countryside. Wool was sent to London. London merchants shipped it to Bruges, where it was made into cloth. The fine cloth made in Bruges was shipped back and sold in England.

Then English merchants asked themselves, why not produce our own fine cloth here in England from our own wool? Then they could sell the cloth at high prices and earn high profits.

The English kings invited the weavers of Bruges to live in England. Many came to London. The wool trade made London wealthy, and merchants grew rich.

Many people from the farms around the city and from other countries came to London. More houses were needed for the growing population. More houses were built outside the city walls.

Then came years of discovery of new parts of the world. Many countries sent explorers over the seas to find new routes to the spice lands of Asia. This was the time when Columbus discovered America. English ships, too, made great journeys of discovery.

London merchants now put their savings to work in faraway places. They helped set up companies in the new English colonies in America. They opened trading posts in India. From the colonies, London merchants bought raw materials. These were made into finished goods in England, and then sold at home and abroad. English trading ships carried heavy loads across the seas. London merchants became wealthier.

The wealthy merchants had their homes and warehouses along the Thames. The narrow streets of the City bustled with trade. On the busy Thames, sailing ships moved in and out from the docks.

Many wealthy people lived in the West End. This is St. James's Square in the 1700s.

As London grew, more food was needed for the city. Food prices rose.

Landowners near the city learned new ways to plant grains and raise animals on their farms. Now more crops could be produced on the same land by fewer farmers. The landowners became wealthy. Many came to London to spend their wealth. Some came to take part in the gay life around the royal court in Westminster, or to take part in government.

Where did these wealthy people stay in London? In the past, English houses had always been built one at a time. Now that London was growing so fast, a quicker way was needed to build houses.

Builders in London started putting up whole neighborhoods on large pieces of land. Sometimes the houses were built around beautiful open squares. Sometimes long rows of handsome houses were built. These houses rose around the edges of the royal parks between Westminster and the City. This was the West End of London, where the wealthy people lived.

Many poor people came to London, looking for work. Most of them came from farms.

East of the City was the East End. Here the poor of London lived. Many of them worked at the docks along the Thames River. Others worked in shops.

Most dockworkers lived in shacks along the Thames. London's slums began to spread as the city grew.

As London grew, more houses were needed. Many children worked to produce bricks for the houses.

There were rows of houses in the East End, but they were not fine houses. The slums of the East End were beginning. But even in the slums, every family had a separate house.

Because its people liked to have their own houses and gardens, London spread out over much more land than other European cities.

By 1800 London had almost a million people, and its houses stretched out two or three miles along the main roads. London could spread no further then. There was no public transportation. Only the rich had horses and carriages. The rest of the people had to walk. Early in the morning workers poured into the city. At night they slowly plodded home.

Trade was growing in London. Elsewhere in England, new factories were turning out goods for foreign markets. Canal boats brought these goods to the docks and warehouses of London's East End. Here the cargo was put aboard ships bound for faraway ports.

As trade grew, more docks and warehouses had to be built. They rose

As London grew, more people began to live in the suburbs. Railroads connected the suburbs with the city.

on both sides of the Thames River. More people came to London to get work at the docks. They wanted to live near the docks. All along the waterfront, pretty villages were swallowed up by cheap houses for dockworkers, and by big warehouses.

More bridges were built across the Thames. Now London could grow on both sides of the river.

Around the same time, trains were developed. Trains carried people into London from the north and south. The coming of the railroads made many changes in the countryside north of London. Good houses were torn down to make way for tracks. High ridges, lined with tracks, were built up. They blocked off streets. Streams had their paths changed.

Factories, warehouses, coal heaps, and lumberyards were built near the railroad tracks. Smoke from the trains poured over the houses along the way.

Farther out, suburbs grew up along the tracks. Many wealthy people came here from crowded London. The growing suburbs swallowed up more villages.

Today people can enjoy the "green belt" around London, only a short distance from the city.

Some railroad companies wanted to build their tracks into the center of London. The government allowed this, but only if the railroads would run cheap trains for workers. Now workers, too, could afford to live outside London. Whole suburbs of cheap houses were built for thousands of workers.

Houses were built farther and farther out from London. Many lovely old villages were swallowed by the suburbs. Some of the villages—such as Paddington, Kensington, Hampstead, Newington, and Brixton—were as old as London itself.

These old villages had their own old churches, inns, town halls, and shops. The villages had a life of their own. The suburban families became part of that life.

In 1918 World War I ended. Then London burst out in all directions. This time it was the electric railroad and the motor bus that brought change. With the fast, new electric trains, people could live even farther from their jobs than before.

Suburbs grew up all along the rail routes to the ends of the railroad lines. The countryside between the railroad lines filled in with houses too. The people who lived here could ride motor buses to get to the train stations. Never before had London covered so much land. Rows and rows of look-alike houses with gardens appeared. They stretched for twelve or fifteen miles around the city.

These maps show how London grew from 1800 to 1958.

This is Market Day in the market square of Harlow. Harlow is one of the eight new towns near London.

More old villages got swallowed up by the new suburbs.

The building of houses stopped during World War II. There was no material or labor for houses. But the government in Westminster and the London planners were thinking ahead. They asked questions. What can we do about this giant city? How can we keep it from growing so fast? How can we keep it from drawing people away from other cities?

The planners and the government finally decided what to do. There should be no more new factories in London. There should be a "green belt" of fields and woods about five miles wide all around London. In the green belt, no houses could be built. Even beyond the green belt, people could not build just anywhere they wanted to. There would be eight new towns, where new houses and new factories could be built.

At last World War II came to an end. But London's growth did NOT stop in the years after the war. The planners could not believe their eyes.

The idea of the new towns was to get people to move away from crowded London. But London is still growing. And so are the new towns.

London and the New Towns

London has grown because many new offices and stores have opened there. There are new stores, new banks, new engineering companies, new laboratories. These draw many workers to London.

The new towns are also growing. Many people from other parts of England want to live and work in them.

How big will London grow? How big will the new towns grow? Will London and the new towns grow into each other to make an even LARGER city?

LESSON 14

A City Married to the Sea:

VENICE

Venice is a city in northern Italy. It is built on many small islands that lie in a large *lagoon* on the Adriatic Sea. Venice is separated from the mainland by two miles of water.

A long railroad bridge and an automobile bridge connect Venice with the mainland. But when people drive cars to Venice they must park them at the edge of the city. Then they ride in boats into the city. Because Venice is built on islands, canals are the "streets" of the city.

Boats called *gondolas* are the taxis. They carry people through the hundred and more narrow canals of the city. Long

Little bridges cross the canals and connect the alleys and sidestreets of Venice.

Motorboats, tugs, and gondolas on the Grand Canal

barges move through the canals to deliver foods and other goods to homes, hotels, and shops.

The largest canal is the Grand Canal. It is the busiest "street" in Venice. Steamboats chug, motorboats skim, and gondolas bounce over the water as people and goods are carried from one part of the city to another. Powerful motorboats carry policemen and firemen on their hurried calls.

Venice is a good city to walk in. Narrow alleys twist and turn among palaces, houses, and shops. The alleys are connected by little bridges over the

Small canal boats carry goods and passengers.

People stroll and shop in Venice's sidestreets.

canals. A visitor can see pots of bright-colored flowers on carved stone balconies, green treetops peeping over garden walls, and fine old churches with tall bell towers. In most neighborhoods the alleys lead to a sunny open square. People can sit, talk, and play in these squares.

Many artists, architects, and city planners like Venice.

Artists have been painting pictures of Venice for hundreds of years.

Architects like Venice because of the beautiful palaces and churches. They say that the buildings fit together in a good design.

City planners like Venice because the city and its buildings do not make men feel like little ants.

It is a city of many neighborhoods.

Venetian glassblowers are highly skilled craftsmen.

St. Mark's Square is a popular place in Venice.

A girl makes lace while her uncle mends his nets.

Old churches and sunny squares add charm to Venice.

The people of each neighborhood feel that they are a part of the whole city.

Many of the neighborhoods specialize in one kind of work. The workers live near their workplaces. The people of one island neighborhood specialize in making glass. Another island neighborhood specializes in making fine lace. Iron mills and shipbuilding yards are on another island. Fishermen and their families live on other islands. One island is a tourist resort with fine beaches and hotels.

On important holidays, the people of all the neighborhoods celebrate together in St. Mark's Square.

The story of Venice is the story of a city and the sea. Twice every day the sea's tides sweep into the many canals and out again. Sometimes, when there is a big storm on the sea, the tides flow up over the walks, into the squares and even into old St. Mark's Church. It was the sea that brought Venice her riches and power hundreds of years ago.

A woodcut made in 1486 shows us that Venice was a beautiful, busy port city. The large building on the right is the Palace of the Doge. In front men are busy unloading goods from merchant ships.

When Venice was rich and powerful

About six hundred years ago Venice was a free city-state. The city had its own laws. It had its own money system. It was one of the richest cities in the world. It was the marketplace of the world. No other city in Europe had such a wealth of goods in its shops and warehouses.

A man who lived in Venice in those days wrote: "Goods flow through this noble city as water flows through a fountain."

In early days, Venetian trading ships had many battles with pirates. So Venice built a strong navy. The merchants of many cities used the Venetians to ship and trade their goods. They trusted the Venetian merchants. They knew the Venetian sailors were brave and that the Venetian ships were well built.

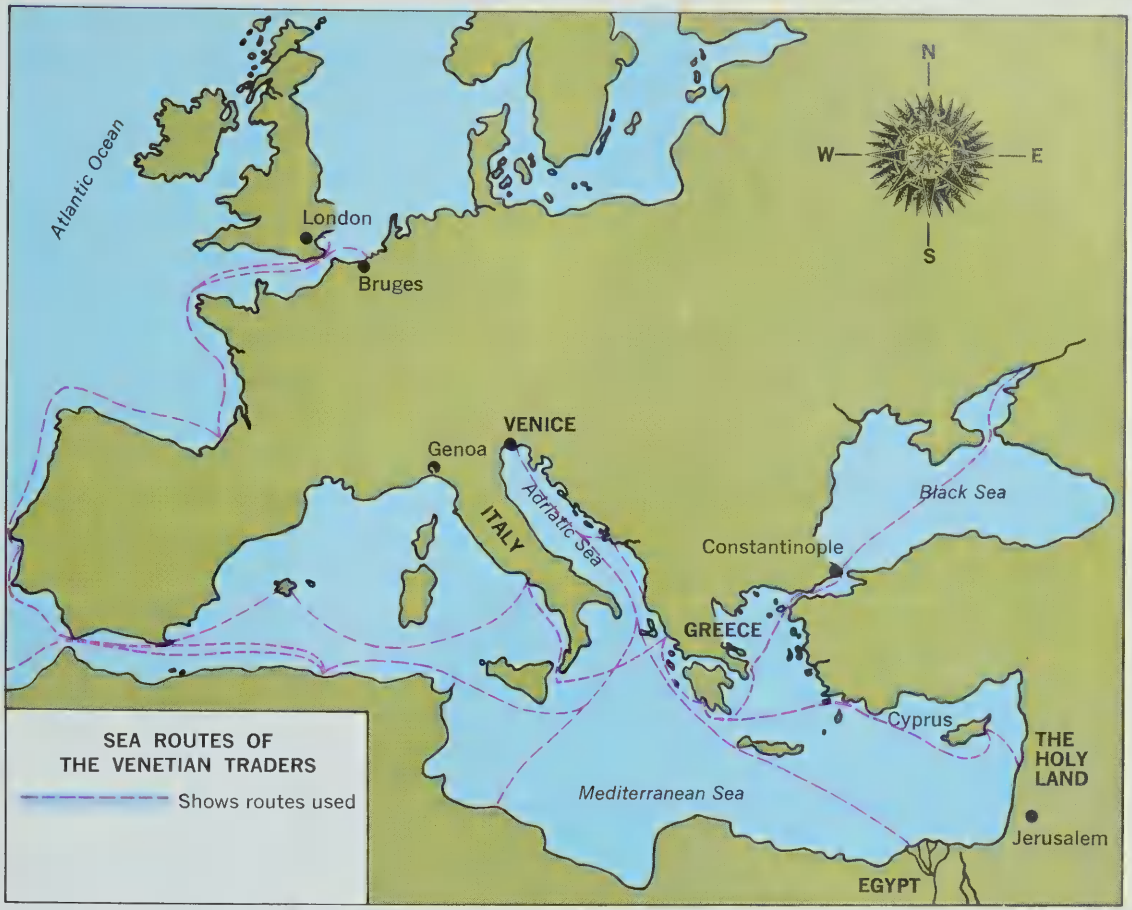
The Venetian government was skillful. It kept the city free from kings and emperors. Trade with all lands was most important to the Venetians.

The water around Venice helped the city to grow rich and strong. The water protected it from armies on the mainland. Venice did not have to waste its wealth in expensive wars. Venetian trade grew. The Venetian flag flew from many colonies and trading posts on the shores and islands of several seas.

Great fleets of Venetian ships moved over the seas, carrying goods between faraway cities to the east and the west. Venice lay at the crossroads of these trade routes.

Venetian merchants sailed to the Black Sea for animal skins. Some Venetian ships carried wool cloth from Bruges. Other ships carried tin, wool, and animal skins from London to Athens and Constantinople. Some ships sailed to the Holy Land and Egypt to meet the camel caravans from faraway India and China.

The caravans brought precious goods



Great merchant fleets sailed from Venice, carrying goods to trade at the ports of Africa, Europe, and the Middle East.

such as spices, silks, ivory, perfumes, and pearls and other gems. Venetian ships carried these precious goods and other things such as glass, sugar, and wine to London and Bruges.

Merchants came over the mountains from countries to the north of Venice. They brought furs, wool, cloth, metals, and wines on packhorses. The merchants from the north bought spices, silks, and pearls in Venice to carry back to their countries.

Tall Venetian ships moved in and out along the Grand Canal. They tied up in the canal near the island of Rialto. The Rialto was the business center of Venice.

The Rialto neighborhood hummed with the voices of the crowds. Shoppers crowded in front of booths of fruit, vegetables, meat, and fish. In the nearby streets were wool shops, silk shops, spice shops, jewelry shops, perfume shops, and wine shops. There were streets with shops for barrels, rope, and other ships' supplies.

The narrow alleys were bursting with

sailors and merchants. One heard people speaking Italian, French, English, Dutch, German, Greek, Turkish, Hungarian, and many other languages.

Men carried heavy loads between ships tied up in the Grand Canal and the warehouses. Some loads of silks and spices were carried right through the big front doors of the merchants' palaces. Many merchants used the ground-floor rooms for warehouses.

There was plenty of work for everyone. There were shipbuilding and repairing, ship loading and unloading. There were fishing and saltmaking. There were many crafts – metalworking, leather working, silk weaving, jewelry making, and making of cloth of gold. Other crafts were glassmaking, bead making, and mirror making.

Moneychangers were busy changing money of many lands into Venetian money. They lent money to merchants to buy goods to ship to distant places.

The Venetian ships carried very valuable goods that took up little space, such as spices and pearls. The merchants bought these goods where they were plentiful and sold them where they were scarce. They charged high prices for the goods. They earned huge profits. They became very rich.

Merchants could also become poor. Huge amounts of savings were invested in ships' cargoes, and the dangers of sea travel were great. Ships could be taken by pirates. Storms could sink ships.

When Venetian merchants came back to Venice from their journeys, they wrote long reports about the faraway countries they had visited. They told about the land and the climate, about the wealth of the country, about the people's work and their needs, and the customs, and about important people of the country. These reports helped the Venetian merchants in their trading with the foreign countries. The merchants studied the reports before they planned their journeys. The report helped the Venetian government to know about the strengths and weaknesses of countries.

Venice was built on many islands. The island of Rialto was the business center of the city.

The merchants kept careful records of their sea voyages and of their businesses. They helped correct maps and sailing charts. The merchants' records told

them exactly what their profits or losses were on each shipment. The merchants developed ways of paying bills without sending gold. They gave *credit*. For example, a buyer of pepper in Bruges did not need to pay the Venetian merchant in gold. Instead, the buyer sent a paper on which he promised to pay the amount at the time and the place the Venetian merchant wanted. If the merchant needed money before the promised time, he sold the paper to a Venetian banker. The banker collected the money from the buyer of pepper in Bruges. Credit made trading easier.

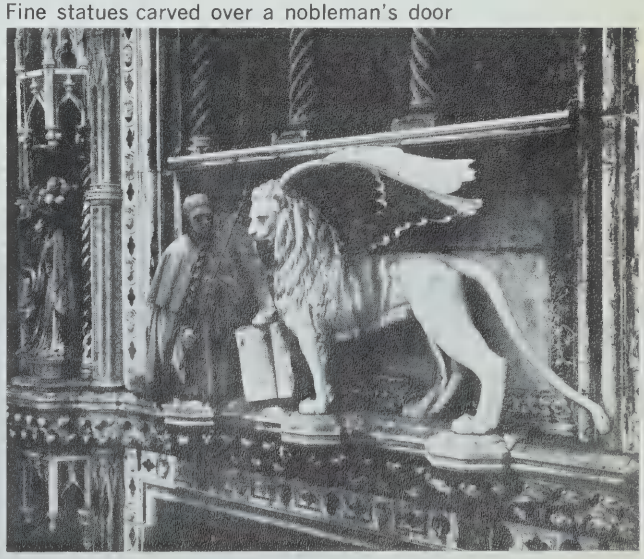
Through well-kept records the merchants passed on their knowledge of business to their sons. Later, the sons became good traders because of what they learned from their fathers.

The government made special rules and laws to protect merchants. For example, there had to be enough sailors to sail the ships well. Ships could not be overloaded. Almost all ships had to sail in groups. All those of a certain kind had to be made alike. This was a useful rule. Sailors could be trained easily. Ships could be changed from trading ships to warships easily. They could be repaired easily.

In Venice a merchant did not have to be rich and own ships before he could trade. Most of the ships were owned by the city. The city rented space on them to any merchant who would pay the highest rent. In this way there was more competition among merchants.

This painting shows that the gondolas used in old Venice look much the same today.

Fine statues carved over a nobleman's door



This painting shows a doge of Venice. The doge lived in a grand palace on St. Mark's Square.

Venice was ruled by merchant nobles. Only the merchant nobles could take part in the government. They ruled Venice well. There was no city in Europe which cared so much for the welfare of the people and the beauty of the city.

The merchants brought many works of art back to Venice from their voyages. They beautified the city with their gifts.

Venice was governed by the Great Council of Nobles. The Great Council elected one noble to be the head of the government. He was called the doge of Venice. He ruled for his lifetime, if he ruled wisely. If he wanted too much power, the other nobles put him in prison or sent him away.

Each year the Great Council of nobles chose a council of ten nobles. The council had more power than the doge. But the councilmen could be on the council for only one year.

The Great Council and the council of ten met in a grand hall in the Doge's Palace on St. Mark's Square. The palace was next to St. Mark's Church. The palace was the center of government.

The nobles made many rules to keep the city orderly. There were rules for ships, and rules about keeping the streets, canals, marketplace, and docks clean. Hotels had to be clean and orderly. People who broke the rules were fined.

The nobles tried to keep the city a safe place. There were lights at the street corners. Police watched the streets at night. There was a special group of men who fought fires. Dangerous workplaces such as the ironworks and the glassworks were in neighborhoods away from the center of the city.

The people were well cared for. There were two hospitals in the city. Medical advice was given to the poor. Old servants got pensions. Widows and orphans got help. Children were not allowed to do dangerous work such as cutting glass and making mirrors.

The industries of the city were helped by the government. The Venetians made some of the most beautiful glass in the world. The government was careful not to let glassworkers leave the city with the secrets of glassmaking. In this way the government made it hard for other countries to compete with the Venetian glass.

The government needed lots of income to run the city—to keep it healthy, to take care of its army and navy, and to

take care of the colonies. Where did the government get the money?

The city earned a good income from taxes on goods coming into and leaving the city. The rent that merchants paid for ship space and the rent that ships paid for the use of docks and warehouses went to the city. Sometimes citizens paid income taxes. The city earned a big income from its own saltworks in Venice and from the saltworks it ran in other lands. The government earned interest on loans it made to kings and emperors.

The government spent its income for a good navy and army, and for salaries of city officials. It spent much for festivals. Festivals brought many visitors to Venice. The visitors spent a lot of money in the city. In this way, the city earned income from its festivals.

One of the grandest festivals was the Marriage of Venice to the Sea. Each Spring the doge threw a gold ring into the sea to show that while Venice depended on the sea, Venice was also its master.

All Venetians were proud to be citizens of their city. Thanks to its careful government, Venice became beautiful and life in the city was good. Venetians had no doubt. Their city was the best in the world.

Every year Venice had a grand festival, the Marriage of Venice to the Sea. Hundreds of gondolas followed the doge's huge barge from his palace to the sea.

LESSON 15

A City Rises from Ashes:

ROTTERDAM

Rotterdam is a city in the Netherlands. There is a little park near Rotterdam's harbor. In the park stands a large bronze statue of a man. His arms stretch toward the sky. Pain shows on his face. Where his heart should be, there is a hole. The statue is called "May 1940." It reminds people of the suffering of Rotterdam.

May 14, 1940, was a day of horror for Rotterdam. That day, Nazi Germany's airplanes poured fire bombs on the city. In one hour, nine hundred people were killed. The heart of Rotterdam was a burning hole.

The terrible war lasted five long years. At last, peace came. The people of

Rotterdam after the bombs fell. The people of Rotterdam begin to rebuild their city. The statue shown at the left is called *May 1940.*

Rotterdam were tired, hungry, and sad. Their city lay in ruins. It would be slow, hard work to rebuild Rotterdam.

The people of the Netherlands are called Dutch. They are used to hard work. The land on which Rotterdam rests was once under the sea. The Dutch drained the water from the land. The Dutch drove millions of logs into the soft mud to make the land firm enough to hold soil and support buildings. The Dutch built huge walls called *dikes* to keep out the sea. If a few grains of sand or a stone falls from a dike, Dutchmen look carefully to see the cause. They must always be watchful. If a dike should break, the sea may take away all of their hard work. It takes courage to live on land won from the sea.

The people of Rotterdam had courage when they looked at their war-ruined city.

"We will rebuild Rotterdam," they said. "We will build it better than ever."

The people of Rotterdam asked themselves: Should the city be rebuilt as it was? Should it be different? How big should Rotterdam be? How should the people earn their living? How should the land inside the city be used? Which way should Rotterdam grow?

Should the city be rebuilt as it was?

Before the war, people used to say, "Rotterdam is a big port with a horrible town." Railroads cut through the center of the city. Factories and run-down

Rotterdam before the war.

houses crowded together along its narrow streets. Rotterdam was dark and dreary.

After the war the people wanted a new, bright city. Rotterdam planners talked with specialists from all over the world. They got advice from planners and from builders of houses, factories, offices, harbors, canals, and roads. They asked artists to help plan a beautiful Rotterdam.

The planners made a master plan for the city. The new Rotterdam would be light and open. It would be beautiful. It would be rich in art. People would feel comfortable in the city.

How big should Rotterdam be?

The Netherlands is a very small country. The Dutch like their cities. They also like their countryside. They feel their cities should not be too large. If the cities grow too large, their small country could become one big city. The Dutch do not want that to happen. They want gardens and flowers. They want

Rotterdam and the ring cities.

parks. They want green countryside between their cities.

Near Rotterdam there are several other big cities: Delft, The Hague, Leiden, Haarlem, Amsterdam, and Utrecht. With Rotterdam, these cities form a ring around a green center of rich farmland. Almost half of the food produced in the Netherlands is grown inside this ring. Vegetables, grapes, and flowers are grown in the fields and in large glass houses. Every day many of these farm goods are sent by airplanes to cities near and far. Tulip bulbs are shipped all over the world.

Today there is also green space between the cities in the ring. But if the Dutch are not careful about how their

This is a model of the new Rotterdam.

The grapes grown in this glasshouse are shipped to cities all over Europe. Fruits and vegetables are grown the year round in glasshouses.

cities grow, this green space might be used up. Perhaps even the farmland in the center of the ring might be used up. Rotterdam and the other cities work together to keep this from happening.

How can all the cities prosper without growing too big? One answer is to divide the labor. If each of the cities in the ring specializes in producing only a few kinds of goods and services, none of the cities will grow too big.

Rotterdam has a large port and many warehouses. It specializes in shipping. It also has big oil and steel industries and smaller industries that depend on oil and steel.

Amsterdam specializes in banking, fine stores, small industries, and in

Tulips grow on much of the Netherlands' farmland. Many tourists come to see the tulips and windmills.

entertainment and the arts.

Haarlem's main products are tulips, chocolate, ships, and machinery.

Leiden is a university city. It specializes in making cloth, too.

Utrecht produces cloth, carpets, musical instruments, and machinery.

Delft produces fine chinaware.

The Hague is a government city.

All these cities are careful about new businesses. Suppose a businessman wanted to start a cloth factory. Rotterdam might not give him a permit to build a factory. But Leiden or Utrecht would. The cities work together to keep their specialties. They want a new business to go to the city that produces such goods or services.

How should the people of Rotterdam earn their living?

Two great rivers, the Rhine and the Maas, flow through Rotterdam's harbor. A canal from the ocean lets ships dock in the harbor. These ships bring grain and iron ore, fruit and petroleum to Rotterdam. River barges carry these goods up the Rhine River to cities in Germany, France, and Switzerland. On the return trip the barges bring cars, clocks, clothes, and wine to Rotterdam. These goods are loaded onto big ships and carried to other parts of the world.

Rotterdam's docks were destroyed during the war, and had to be rebuilt. Today Rotterdam has the world's most up-to-date port. Radar stations guide ships into port in bad weather. Ships at sea can radio to the port what goods they are carrying and how much. When the ships arrive, dockworkers are already waiting for them.

A new harbor called Europoort is being built at Rotterdam. It is to be used by the six countries of Europe's *Common Market:* the Netherlands, Belgium, France, West Germany, Italy, and Luxembourg. When the new port is ready, Rotterdam may be the largest

Oceangoing ships and river barges in the port of Rotterdam.

port in the world.

For many years Rotterdam earned most of its income from the port. During World War II, city planners in Rotterdam wondered if Rotterdam should be a port city only. After much study, they thought it would be good for Rotterdam to have more industries. Then there would be more ways for people in the city to earn their living. Also, the Netherlands wanted more industries for the whole country.

With its large port, Rotterdam is a good place for industries that use bulky raw materials from other countries. Oil refineries have been built in the harbor. Chemical plants and plastics factories have grown up nearby. There is a rubber factory, too.

Iron and steel mills have been built near the sea. Iron ore comes to these mills by ship from Spain and Sweden. Coal comes to the mills from the United States. There are shipbuilding yards near the mills. Small industries that use oil and steel products are growing up near the big refineries and mills.

How should the land inside Rotterdam be used?

After the war, only a few of the buildings were left standing in the center of Rotterdam. A part of the 400-year-old church was still left. The city is rebuilding it. The old town hall was still standing. But most of the buildings in Rotterdam's heart are new.

The center of the city is open and airy. The city planners found better ways to use the land. There are no factories in the center today. There are more tall office buildings than there used to be. The offices in these buildings serve the port and the big industries there.

The Lijnbaan shopping center is a pleasant place to shop, walk, and sit.

The center also has banks, insurance offices, department stores, small shops, hotels, restaurants, and theaters.

A new shopping center is built around a pleasant walkway. Benches and flower beds line the way. In the summer, bright-colored parrots chatter in cages. Families like to take Sunday or evening walks here. The walkway is free of automobile traffic.

In downtown Rotterdam, walkers enjoy the long views, the trees and flowers, and the fountains. There are statues in little courtyards and parks, and interesting designs on buildings.

Before the war, the streets were narrow and crowded. Now much traffic moves easily over six wide avenues. People on bicycles have their own lane and so do people who want to walk.

Rotterdam used to have several railroad stations. Now all the trains come to one central station. A new subway is being built.

Near the railroad station stands a huge, new *wholesale* building. Almost three hundred companies have showrooms here for their goods. Buyers for stores can examine all kinds of goods —from socks to sea-diving gear.

Nearby is the big Building Center. Builders from all over the Netherlands come here to inspect new materials, tools, and building methods.

Many tall apartment buildings have been built for the people who live in the city. There are also low apartment houses, and apartments built over stores.

Fewer people live downtown now. Of those who do, many are older people

without children. Many young families like to live away from the center of the city. They like to have play space, gardens, and fresh air.

Many new houses have been built in all the city's neighborhoods. The north side of Rotterdam has grown the most. Many new apartments have been built near the docks, on the south side of the Maas River. The dockworkers can live near their work. Here one can see the masts of ships over the housetops.

New neighborhoods have grown up on the edges of Rotterdam. The houses are sunny and airy. There is plenty of space. These new neighborhoods have their own schools, churches, shopping centers, and playgrounds.

Big parks lie around the edge of Rotterdam. Families enjoy the playgrounds, ball parks, swimming pools, and canoe streams in the parks.

Which way should Rotterdam grow?

Trade is growing in the port. More land is needed for warehouses, offices, and factories. New and better jobs draw more people from other cities and from the countryside.

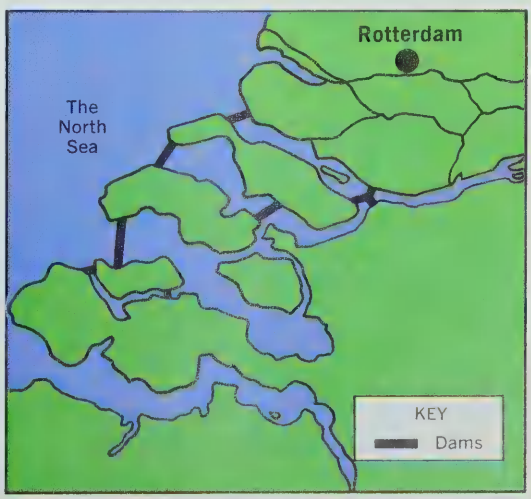
In which direction should Rotterdam grow? If Rotterdam grows toward the north or east, it will grow into other cities. So planners think the city should grow toward the southwest.

Engineers are working to make new land along the coast southwest of Rotterdam. Several long islands here are separated by narrow bays. The engineers plan to build dams across the bays. Then the engineers will drain the seawater out of the bays. Miles of strong dikes will be built to keep out the sea.

New roads will join this land to Rotterdam and other cities. There are plans to build a new town on the new land. Over 100,000 people will live there. The new town will help take care of the big growth expected in Rotterdam.

The people of Rotterdam are looking to the future. They are proud of their city, risen from the ashes of war. Their vision and hard work have won the world's respect.

New land for a new town.



LESSON 16

A City That Has More People than Jobs:

CALCUTTA

The Ganges River has special meaning for the people of India. They call it a holy river. Many people travel long distances to bathe in the Ganges each year. The great river starts high in the Himalayan Mountains. It flows across the plains of northern India. Then it pushes out to sea in many branches. One important branch of the Ganges is the Hooghly River.

Once, long ago, there was only a small village of mud huts on the banks of the Hooghly. Life was simple and peaceful for the people. Things did not change much from year to year. There was always enough rain and sun to make the rice grow.

Calcutta, a city that has more people than jobs.

Ships and boats come to the port city of Calcutta.

But the simple life of the village stopped one day almost three hundred years ago. On that day big ships from England sailed into the harbor.

The Englishmen on the ships were looking for a place to set up a trading post. This was the place, they decided, even though the climate was not healthful.

It was hot and damp. Wild animals roamed the low land. But the place was right because of the river. Ships could come in from the ocean.

The little village soon became an important place for the English trading company. Goods were unloaded at the port and sent deep into the countryside around it. Raw materials from the farms, plantations, and mines were brought to the village and shipped to faraway England.

Workers brought bales of green tea from the tea plantations in the mountains. Rice and *jute* grass were brought to the port from smaller farms. In the village, some workers sorted tea leaves and dried them. Some milled the raw rice. Some workers wove the jute into strong burlap cloth and tough rope. The whole area became prosperous.

People came to the port on the Hooghly River from all over India. They hoped to make a better living there. The port became a city. It was called Calcutta.

Today Calcutta is the largest city in India. It is the capital of the state of West Bengal. Ships carry jute and jute products from there to countries all over the world. There are rich mines of iron ore, coal, and other minerals in West Bengal and nearby states. Much of the

Workers use the Howrah Bridge to cross the Hooghly River. Many factories are across the river in the city of Howrah.

iron is shipped from Calcutta to other countries. Some of the iron is made into finished products in factories near Calcutta.

Many of these factories are across the river in the city of Howrah. Some are large factories where more than a thousand people work. Heavy machinery and railroad equipment are produced in them. But most of the factories are small. They produce nuts, bolts, and small tools.

Many factory workers live in the crowded parts of the city. Those who live in the country must take the train to work each day. These Indian workers go barefoot and wear white, loose-fitting clothes called *dhoti*.

Not far from the factories are rich, green fields of rice, sugarcane, and other crops needed for food. There are also fields of jute. The land is good for farming.

None of the farms are very large. Almost all are small. Yet once the farms were large. As the farms were passed down from father to sons, and from these fathers to their sons, they were divided

Many people from all over India move to Calcutta.

into smaller and smaller farms.

The families who live on these small farms are large. Grandparents live with their sons' families, all in the same household. Their only income is from the small plot of land.

Too many people live on too little land! No wonder so many move to Calcutta. They hope for a better life in the city.

Other people have flocked to the city when there was a *famine* in the countryside. They did not know what would happen to them in Calcutta. All they knew was hunger where they were. Thousands go to Calcutta. Many stay.

Many people fled to the crowded city when the state of Bengal was divided in 1947. Half of the state was given to the new Muslim nation of Pakistan. There was much fighting between the people of the Muslim religion and the people of the Hindu religion.

When villages of Hindus became part of the new Pakistan, many Hindus went to Calcutta.

Calcutta has grown for still another reason. Medical care is better. More babies live to grow up. Many grow up to have large families of their own. More diseases can be cured. So more people live longer.

In 1920 there were one million people in Calcutta. In 1960 there were three million, and another four and a half million in the countryside. Yet the land area of Calcutta did not get bigger. It cannot. Swamps, floodlands, and lakes keep the city from spreading.

Calcutta is just about the most crowded place in all India.

How do these people live in the city?

Many people move to Calcutta from all over India. They bring with them the language, customs, clothing, holidays, and ideas of their villages. They live in the city almost as if they were still living in their villages.

On the holidays of the different groups, parades move through Calcutta's streets. These differences make the city colorful. These differences also divide the city.

Many people do the kind of work they did in their villages. Many children do

the same kind of work their parents did. Because much of the labor is divided in this way, it is hard for people to change jobs. Because many people cannot choose jobs according to their skills and talents, Calcutta and India suffer a great loss.

Many people have little choice in jobs because they have little education. They must earn their living by working with their hands.

Some of the people find jobs building houses. They are hired in teams to dig holes for foundations for new buildings. They work with their hands and with shovels. There are no machines to dig holes. Men and women workers carry heavy loads of bricks and mortar on their heads. They climb bamboo ladders with these heavy loads.

Men and women carry heavy loads of bricks on their heads up tall bamboo ladders.

Many people in Calcutta earn their living by working with their hands. In the photo below, a foundry worker pours molten metal from the furnace. The workers are wearing loose-fitting clothes called *dhoti*.

A man in a small foundry cleans a metal casting. His only tools are a hammer and a chisel.

A small boy sells ribbons and cloth on the sidewalk during a Hindu festival season.

This is a small tailor shop. It is one of many shops in a row. The shopowner also sleeps here.

Some men find work pulling *rickshaws* or carts. Some become gardeners and servants for Indian or foreign families with higher incomes. Some become roadside barbers, shoe repairmen, or wandering tea servers.

Some families who move to the city set up tiny shops on the sidewalk. They lay out on the sidewalk little piles of buttons, plastic combs, pens, and bits of cloth to sell. There may be a long row of such "shops." Each sells the same things and at almost the same price. The families earn just a few pennies a day.

Many of the people who go to Calcutta to earn a living are men. Their wives and families stay at home in the villages. The men live with other men in the city. Some sleep where they work, to save the cost of rent. If they are rickshaw pullers, they may sleep on the sidewalk near the rickshaws. These men may be able to visit their families only once or twice each year. They may go home during

planting and harvesting times to help on the farms. Every month they send money home to their families.

A great deal of money goes out of Calcutta this way. This money helps the families in the villages. It does not help the money go around and around in Calcutta.

Calcutta has many other problems

Calcutta has many other worries. There are too many people and not enough jobs. Even people with a good education have a hard time finding jobs.

Housing is poor. Large numbers of people live in the *bustees*. These are slum neighborhoods where a family with mother and father and four or five children live crowded together in a small hut. These huts are packed together.

Calcutta needs many things that we take for granted. There is no clean, running water in the bustees. Many families must share a water pump outside. They take baths at the pump, or in a tank or pond. The same water is used to wash clothes, pots and pans, and dishes. Sometimes water from ponds is used for drinking.

The toilet, if there is one, is shared by many families. Otherwise people must use the open gutter. Because of this, diseases sweep through the bustees and take the lives of many people.

The water in this pond is used for drinking and bathing. The group of houses next to the pond is called a *bustee*.

Goats being herded to a marketplace slow traffic on a busy Calcutta street.

Calcutta needs a good system of transportation. There are not enough streetcars, buses, or taxis. At busy times of the day, streetcars that should carry only seventy-five persons carry two hundred. It is the same with buses and trains. People sit on the tops and hang on the sides of the cars.

Traffic moves slowly through crowded streets. Rickshaws pulled by men, carts pulled by oxen, men carrying heavy loads on their heads, and cows and bulls fill the streets at all times.

Calcutta needs more hospitals, too. Because of the bad water, dirt, and lack of money to buy food, many people become sick. The hospitals are overcrowded.

Calcutta needs many more schools. Only one-half of the children go to grade school. Even fewer go to high school—only three out of every ten boys, and two out of every ten girls. Boys and girls often quit school early to find work. They need to add to the family income.

A rickshaw man pulls a heavy load of goods.

A crowded train brings workers to Calcutta.

Sheep graze on the Maidan, a large park along the Hooghly River. New buildings are next to the park.

Monkeys entertain people on the Maidan.

Thirsty people buy soft drinks on the Maidan.

The pleasant side of Calcutta

In this city the buildings are not so tall that they make people feel small. People never need a heavy coat, because it is never cold.

On Sundays and other holidays people gather on the Maidan, a large pleasant park along the Hooghly River. Dozens of soccer games and cricket matches are played on the Maidan at the same time. Little children laugh at trained monkeys or buy balloons from the balloon man. Singers and storytellers come to the Maidan. Families take boat rides on the river. The tea seller and the soft-drink man peddle their wares. Even if people have no money, they can listen to the bagpipe band concert.

In other parts of the city are smaller parks or squares. Many have ponds where children can learn how to swim.

What about the future?

Twenty years from now, Calcutta may have seven million people. Calcutta and the countryside together may have twelve to thirteen million!

Much tax money will be needed to pay for a better water supply, transportation, more schools, and hospitals.

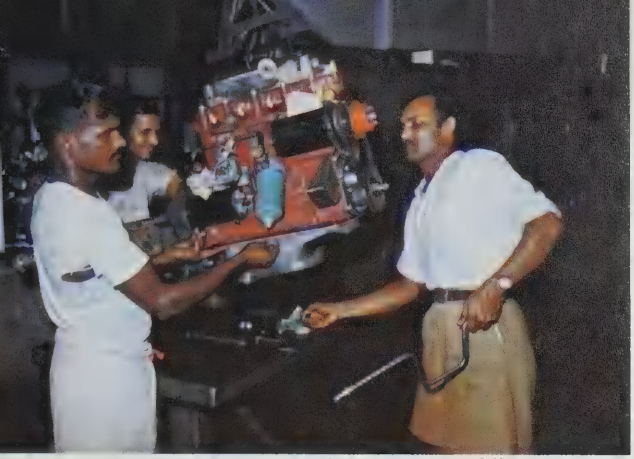
But first of all, people will need jobs to buy food, clothing, and housing.

To get jobs, more factories are needed. To run factories, skilled workers, water, electric power, and machines are needed. All of these are scarce.

Good roads and transportation are needed to bring in raw materials and take away finished products.

Indian planners are being helped by city planners from the United States and other parts of the world. They are trying to solve the city's many problems.

These specialists are making plans to improve the health of the city by getting more pure drinking water.



Skilled workers assemble an automobile engine.

This man operates a machine in a jute factory.

Specialists are planning ways to help businesses move to Calcutta and give more jobs to people. New businesses would give the city more taxes. More taxes would help the city get the services it needs.

But without good transportation, without good water and health services, without good schools, businesses will not want to move there.

Savings are not plentiful in India. Government planners cannot use up too much of the country's savings for Calcutta alone. Other cities need help too.

New towns, far outside Calcutta, are being planned by the specialists. New towns will have their own factories and stores. People from the farms can find work and a place to live. It is hoped that the people will want to move to the new towns and not to crowded Calcutta.

More people need to be trained for factory work. The schools should teach all the children to read and write. Schools will have to teach adults and children skills they can use in new jobs.

Perhaps the most important problem Calcutta must solve is how to break down the walls that separate the different people. Many people still think of themselves as villagers. They do not think of themselves as citizens of Calcutta. The people of Calcutta are often very helpful to the people in their own neighborhood. But many problems in the city are too big for one neighborhood to solve. Neighborhoods will have to work together to build a better future for Calcutta.

This girl is studying to be a lawyer.

LESSON 17

A City That Uses Its Wits:

SINGAPORE

On the other side of the world, there is a small island. On this small island there is a big city. The island is an independent nation. The island is called the Republic of Singapore—one city on one island. It is a city-state.

Singapore Island lies off the tip of the long, narrow Malay *Peninsula* in Southeast Asia. The island is joined to the peninsula by a man-made land bridge called a *causeway*. Cars, trains, and trucks carry people and goods over the causeway. A big waterpipe alongside the causeway carries water from the neighboring country on the peninsula to Singapore.

Small boats called tongkangs carry goods from neighboring countries to Singapore.

Food and other goods are sold to shoppers in one of Singapore's marketplaces.

Singapore is a lively city. Ships from all over the world come into its busy port. Men load and unload the ships. Cars, trucks, buses, and motor scooters jam the city streets. Tall office and apartment buildings reach into the blue sky. Shops and department stores sell goods from all over the world.

Restaurants serve the foods of many nations. Along some streets there are open-air food stalls. The delicious smells of roast pig, duck, and fish drift through the streets.

The faces and clothes of people from many countries can be seen on the streets of Singapore. Chinese, Malays, Indians, Pakistanis, and Europeans hurry about their business. They smile easily. Almost two million of them live and work here. They are proud of their city. They are the people of Singapore.

In 1819 Sir Thomas Stamford Raffles, an English businessman, came to this island. Sir Thomas saw that it was the right place for a great trading port. Everyone else saw it as just a hot, unhealthy swamp. But Sir Thomas knew he was right. He signed an agreement with the rulers of the island. The agreement said that Sir Thomas could build a trading post at Singapore harbor.

Trading ships from England made long journeys to China. The port at Singapore shortened the voyages of English ships between England and China. English ships no longer had to sail all the way to China. They stopped at Singapore. There they met ships from China. Chinese goods were traded for goods from England, and then the ships returned to their own countries.

English ships from India also came to Singapore. They also carried English goods to trade for the goods of China.

The ships of many other countries came to Singapore. Sir Thomas wrote good trading laws. The laws were fair to all. All traders were treated alike. No one had to pay taxes on the goods that were brought to Singapore.

Sir Thomas welcomed businessmen and workers from all over the world.

Many old wooden houses are being torn down. They are being replaced by modern apartment buildings.

Clothes drying in the sun look like flags waving from the windows of these new apartment buildings.

Farmers and traders came from China, merchants from Arabia, craftsmen from Ceylon, and bankers from England. Malays, who had always lived on the island, and on the nearby peninsula, also came to work. Singapore became a city.

Sir Thomas treated all of these people with respect. He helped them to live and work together. His door was always open to anyone with a problem.

Sir Thomas' idea that different peoples could live together in peace can be seen in Singapore today. In 1959, when the island became a nation, Prime Minister Lee Kuan Yew said, "We are going to have a nation of many races in Singapore. We will set the example. Everybody will be equal in language, culture, and religion."

The people of the city are doing much to make Singapore a fine city. Once Singapore had terrible slums. The people voted that the government should build housing for people who could not afford good places to live.

The slums were torn down. Tall apartment buildings are being built. Some apartment buildings have been built in neighborhood groups. Each neighborhood has its own market, schools, hospitals, and community centers. People who once lived in slums can now live in these neighborhoods. The rents are low.

The government wants all Singapore's children to learn to read and write. The schools are free for everyone for the first six years. There are Chinese, Malay, English, and Indian schools. Children may go to the school they choose.

Many languages are used in Singapore. Many of the children study English. English is spoken around the world. It is a useful language for the people of a world port.

For the older students there are fine universities. Students can learn to be engineers, doctors, teachers, lawyers, and scientists.

The government is interested in the health of the people. City workers make sure that water and food are clean and

safe. Doctors and nurses work in free clinics. Anyone who is sick may visit a clinic. Singapore is in a warm, rainy part of the world where there are many dangerous diseases. In nearby countries, thousands of people become sick from these diseases. But Singapore is one of the healthiest cities in Asia.

Singapore's people are also healthy because they eat well. The warm, wet climate is good for farming. Many of the vegetables and all the chickens, ducks, pigs, and eggs that Singapore needs are produced on the island. Most people can afford to buy good food.

How can this little island give its people so many choices? The island has no raw materials. Even water must be brought to the island by pipeline. Yet, even with these problems, people in Singapore earn more income than the people of any other country in Asia but Japan.

One of the reasons the people of Singapore earn high incomes is because the port is one of the world's biggest and busiest. There are four miles of docks. Thirty ships can be repaired, unloaded, and loaded at one time.

Rubber, lumber, spices, and other raw materials come to Singapore from nearby countries. These raw materials are sorted and graded in Singapore. That is, they are separated according to how good they are. Singapore businessmen are well known for their careful and honest grading. Buyers all over the world know that they will get the grade of goods

School children get plenty of exercise.

Part of the University of Singapore.

Students experiment in chemistry class.

Loading goods on ships in Singapore's port.

they have been promised.

Machinery and other finished goods are shipped to Singapore from all over the world. From Japan come TV sets, cameras, and radios. From Hong Kong come cotton cloth and silk. India and Pakistan send carpets and cloth. From Europe and the United States come machines, trucks, and cars.

From Singapore many of these goods are sent by ship or train or plane to the countries that buy them.

Thousands of people earn incomes by loading, unloading, and taking care of ships. Businessmen in the port need many services. People work in the banks where businessmen put in or borrow savings. Others work in the shipping

This is Singapore's main business and banking area. It is called Raffles Place.

Many factories are being built in one of Singapore's new industrial centers.

companies, insurance companies, and warehouses.

Thousands of people earn incomes by working at the English air and navy bases on the island. These bases protect Singapore.

Trading and the air and navy bases provide jobs for many people. But these jobs are not enough for a growing city. Every year there must be jobs for 30,000 more people.

The leaders of Singapore—businessmen, government officials, bankers, and others—saw that Singapore needed more ways to earn income. They decided that Singapore should build more factories. Singapore would produce goods as well as trade them. There would not be enough people on the island to buy all the goods. Singapore would sell the extra goods to other countries.

City planners looked for a place on the island to build factories. They chose a place that was a swamp.

Bulldozers went to work. Small hills were pushed into the marsh. This built up the swamp into dry land. The land could be used for a huge factory center. There will be a steel mill, a shipyard, a chemical factory, a fertilizer factory, and an oil refinery. Factories that use one another's products are being built close together. For example, the shipyard is close to the steel mill because the yards need steel to build ships.

On another part of the land, smaller factories are being built. There will be factories to assemble automobiles, to make plastics, cloth, matches, candy, nails, cables, and many other things.

A new town is growing up with the factory center. There are new apartment buildings, schools, a hospital, and a community center.

The government is planning other new towns around the city of Singapore.

The new town of Toa Payoh is being built near a factory center. Schools, a hospital, and a community center will be part of the town.

A road will connect the towns. Each town will be connected with the big city of Singapore by *monorail* trains or by fast boats. The use of land is being carefully planned so that later there will always be places where no factories are built. Then the people of the city of Singapore and the new towns will still have places to fish and swim and enjoy the countryside.

The new towns and factories are being built with savings from many places. The savings come from Singapore, Hong Kong, Japan, Taiwan, Australia, England, and the United States.

Why should a businessman want to set up a factory on Singapore Island? He knows that Singapore has a fine port. He knows that Singapore is famous for its hardworking, skillful people. He knows that they are honest. He knows that Singapore businessmen are always looking for new ideas. He knows special laws help new businessmen to get started.

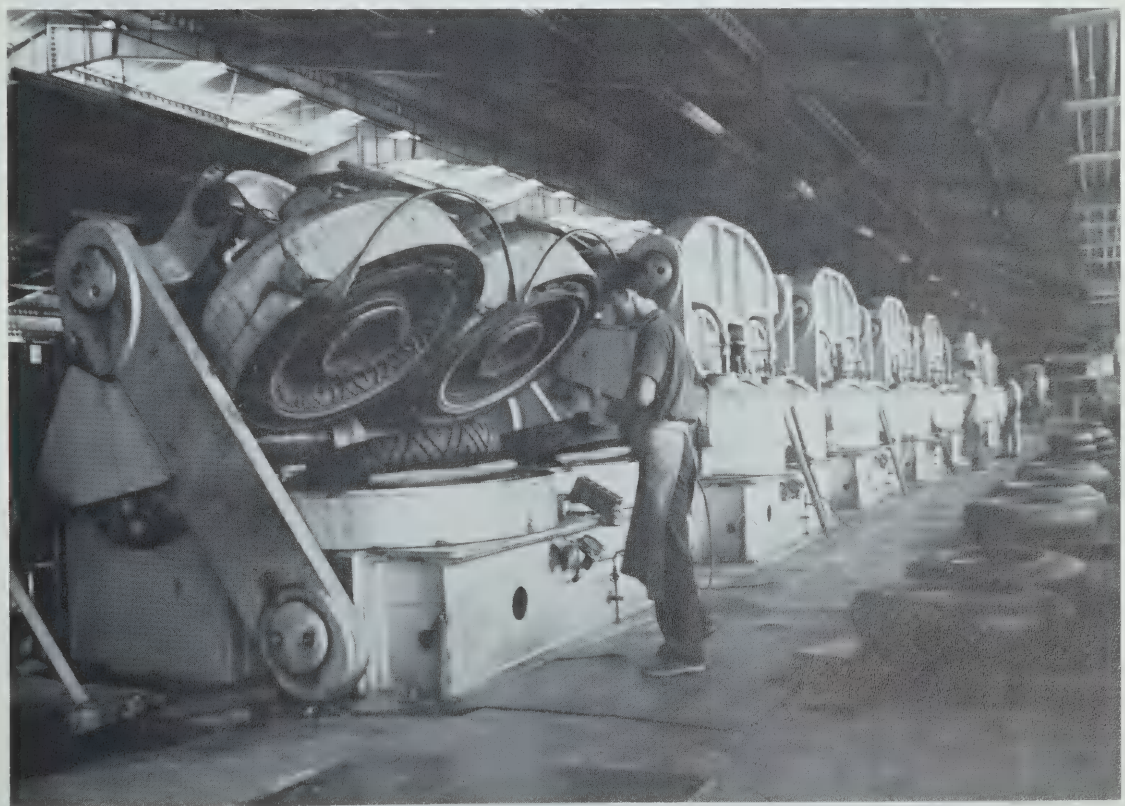
A ship is cleaned and repaired near a factory center.

He knows that Singapore banks have plenty of savings. They are willing to risk savings on good business ideas.

Businessmen do not have to build their own factories. They can rent a small space in a large factory building. They can rent more space as the businesses grow. The government tries to make sure that factories have everything they need. Training schools, paid for by taxes, teach people to do the jobs of modern factories.

There is enough land, water, and electric power in Singapore. The government has built a water treatment plant. Used water is cleaned there so

Workers produce many kinds of tires in this factory. Most of the tires are shipped to other countries.



that it can be used again in the factories.

Singapore is a new and independent nation. A few years ago it was one of a group of states called the Federation of Malaysia. The other states were on the Malay Peninsula and the island of Borneo. They all worked together for a while.

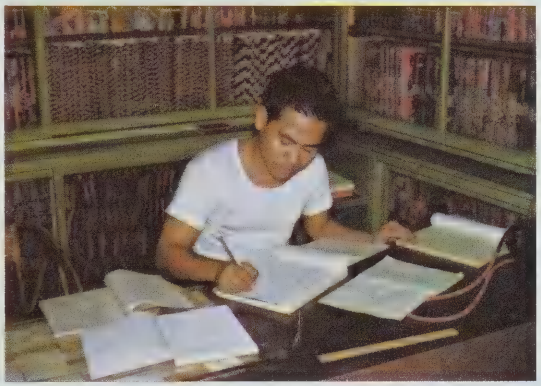
Singapore was rich in savings and people with many skills and new ideas. The other states were rich in raw materials. Singapore had what its neighbors needed. Singapore's neighbors had what Singapore needed.

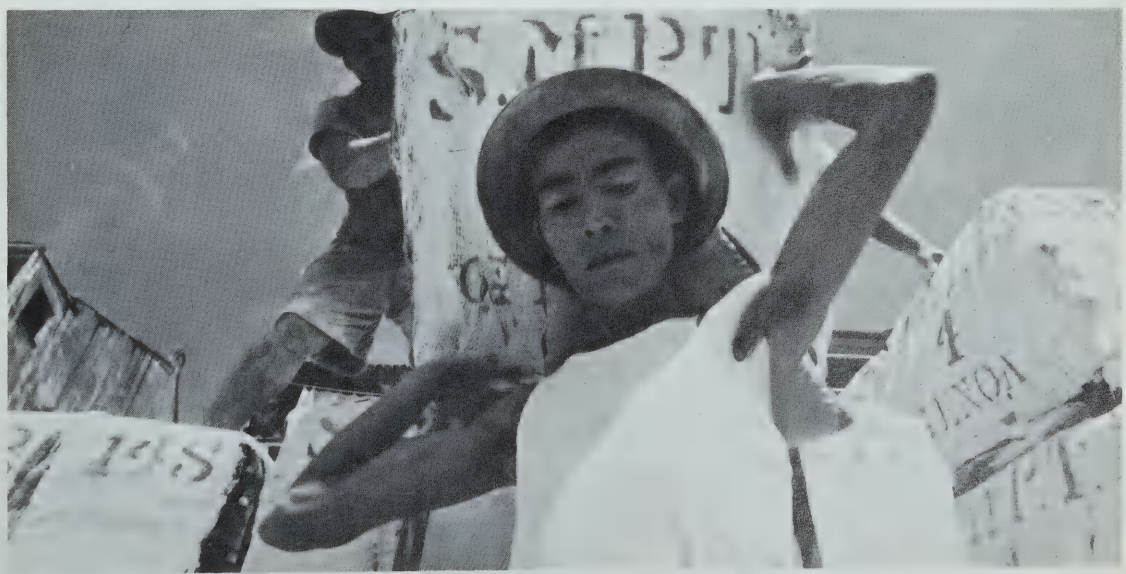
But there were disagreements between Singapore and the other states. The little family of states broke up. Singapore became independent. Many people were disappointed. These people hope that Singapore and her neighbors will soon settle their differences.

Many people even think that someday Singapore will become a meeting place where nations from all over Asia can come to settle their differences.

Singapore knows that peace in the world is important to a trading and manufacturing city. Without peace there is little trading. Without trading the people of this city-state cannot use their wonderful skills.

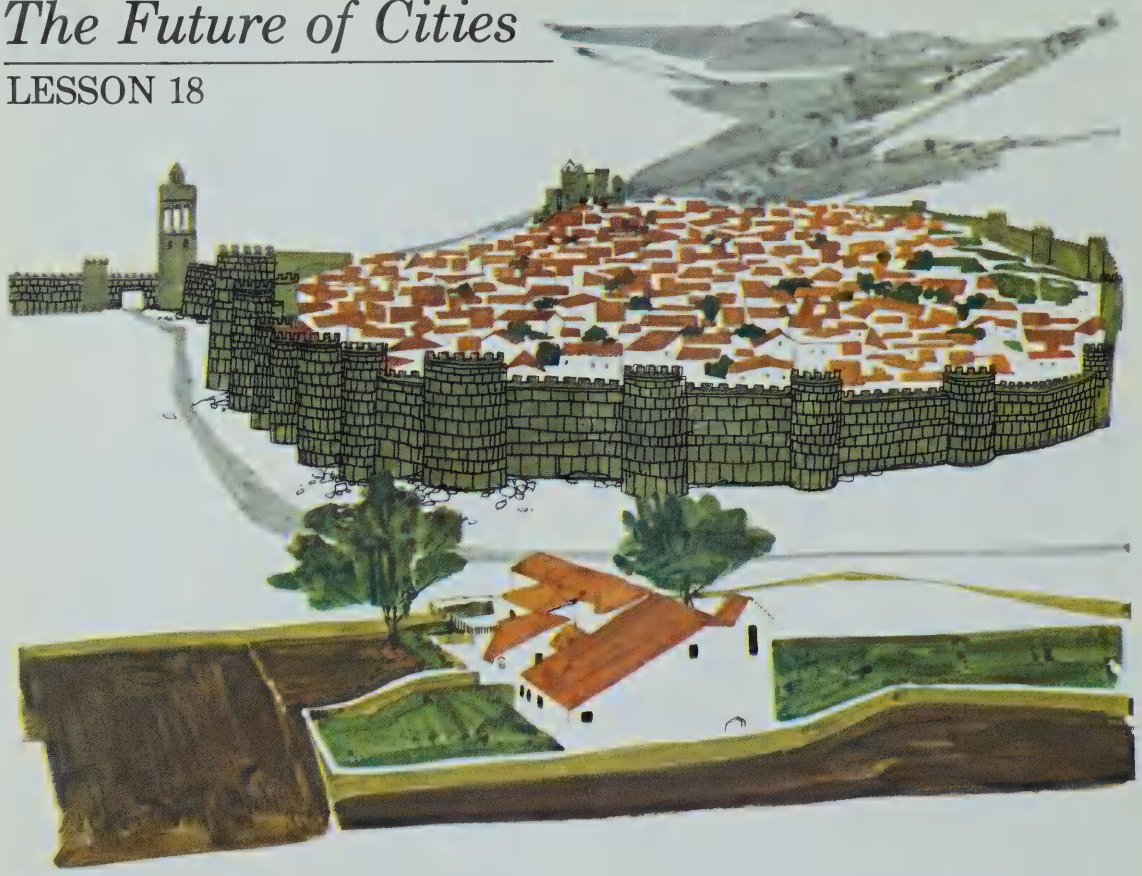
The People of Singapore





The Future of Cities

LESSON 18



Dear Boys and Girls:

For a year now, we have been studying cities. First we discovered that cities were the inventions of men. But until farmers learned how to produce more food than they needed, cities could not be built.

Then men came together to defend themselves against their enemies. They built strong walls around their cities. They came together in the cities to trade goods and ideas.

Men needed government to keep cities peaceful and orderly. So men learned to live with the ideas of other people. Civilization began to grow.

Living together peacefully helped men divide the labor. They learned their trades very well. They became specialists.

Specialists could produce goods and services in a shorter time than before. Because of specialization, men had more free time. Because of specialization, they had greater choices in jobs. Buyers had

a greater choice in goods and services.

More and more people moved to the cities. From earliest times, the city has been drawing people from the countryside like a magnet.

New inventions helped to make the lives of people in the cities better. Then trains, automobiles, and airplanes were invented. Cities could be built away from oceans, rivers, and lakes. A new city did not have to depend only on ships for transportation.

As transportation became cheaper, cities could trade with each other better than before. Again men's choices increased.

Factories continued to produce more and better goods. Science helped men control many diseases. Life in the cities became more healthful.

Yet some of these new inventions and discoveries brought new problems to the cities.

When factories could produce many automobiles in a short time, more people could buy them. Highways and streets became crowded with cars. City neighborhoods were torn down to make wider streets. Trees were uprooted and old buildings removed to make room for more parking lots.

Cars helped to poison the air of the cities too. Many families moved outside the cities to escape the bad air. Many well-to-do families moved away from the cities to enjoy fresh air, green grass, and shady trees. They built their houses and schools in suburbs outside the city and its government.

Today wide highways connect the suburbs and cities. For miles and miles around the centers of cities, the land is neither city nor farms. It is city sprawl.

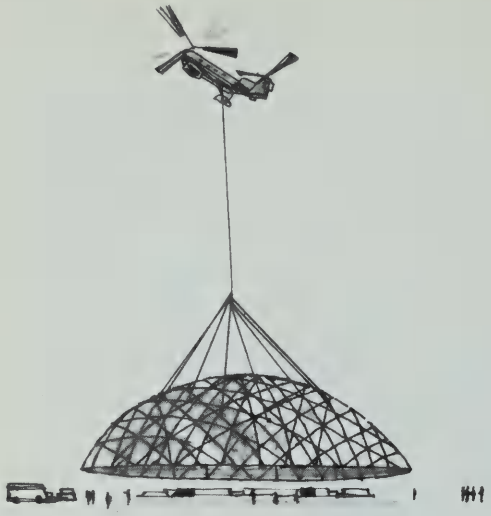
The once strong hearts of great cities have been weakened. At one time they were healthy and vigorous. Now they are running down. Remember the busy Agora of Athens? It was a true marketplace of goods and ideas. The Agora was used as a place of worship. It was the center for government and for social events as well. Few cities can compare with Athens of the Golden Age.

Today cities are losing people with good ideas who could help to make the cities better places. Cities are losing businesses, too. Businesses are following the people who move to the suburbs. That means cities are losing badly needed tax money. That money could help to solve some of the cities' problems.

At the same time, great numbers of poor people are moving into the cities from the countryside. This is happening all over the world. These people hope to find jobs in the cities. Yet many of them have no skills. It is not easy for them to learn to live in cities.

Are cities becoming unnecessary? Once walls protected cities from their enemies. But walls cannot protect cities today. Remember Rotterdam? The heart of that city was quickly destroyed, all in one morning.

If men do not learn how to live together peaceably, men may one day



say, "Let us scatter and live in the hills." And so men may abandon the cities they built.

Inventions such as the telephone, radio, and television helped make it possible for people to live far apart. People no longer have to live close together to talk to one another.

Scientists think that the day may come when helicopters will be able to drop ready-built houses anywhere in the world. People in each house will have their own food and water supply. Power gotten from the sun's rays will be used to heat and light each house.

A person may talk and see the person with whom he is talking on the telephone. A person at home may get information from schools, libraries, and hospitals with such telephones.

Are cities still necessary? Many people are worried. Some cities seem to be falling apart. In some cities cars seem to be more important than people. Some cities are growing too big. Some big cities are growing and spreading to the edges of other cities.

"What is happening to our cities?" ask many people. "What can we do about our cities?"

"We know cities are important!" they say. "People do need cities. They need to share their ideas with other people. Television can never take the place of seeing a play in a theater or a trip to a zoo."

Specialists are studying cities and their problems right now. They are watching the cities just as doctors watch their patients. These specialists know that new inventions and scientific discoveries cause cities to change.

The big questions that city specialists are asking are: How much should cities change? Which of the old ways of doing things should cities keep? Which old buildings should cities keep?

Are scientists, engineers, and inventors the only people who can cause cities to change? Can't we take part in what is happening to our cities? Yes!

We can start by asking, "What is a good city?" We can keep on thinking about this question and talking about it with others. When many of us care about what good cities are, we will begin to make our cities good places in which to live.

Perhaps we will invent ways to keep good cities from growing too big. Then people will not go away from the cities.

Governments of the cities and states

and the government of the United States are all trying to help. In many cities old, run-down neighborhoods are being torn down. New, clean neighborhoods are put up in their places. Governments are also trying to help the many people who come into the cities from the countryside. These people need special schools and other aids.

So, boys and girls, do you see how important it is to learn about cities? You have learned a great deal this year. But what you have learned is really only a beginning, a launching pad. I hope your studies have taught you three important things—how to see the city, how to read about the city, and how to work for the good of the city.

How do you "see" a city? Draw a picture in your mind of the kind of "good city" that you would like to live in. This picture will change often as you grow up. But it can be a kind of ruler to measure with. You can measure the city where you live against your picture of the "good city."

How do you read about a city? Find books about architects and planners and newspapermen. Many of them have worked hard to make cities better places to live in. You've already met some of these people in OUR WORKING WORLD—Frank Lloyd Wright, Walter Gropius, Louis Kahn, Ralph McGill.

How do you work for the good of the city? Start now while you are young. Ask yourself: What can I do for my city? What can I do with my friends to make my city a better place?

Helping to keep the city clean is the least anyone can do. There are many other tasks which you can do in your school and in your neighborhood to make your city better.

If you learn to work for your city when you are young, you may enjoy working for your city when you are grown. You might work for your city as a volunteer, or as a city worker, or as a city specialist, or as a city lawmaker.

The city is the invention of men. With the city, civilization grew. Cities have given much beauty and sorrow and meaning to men's lives. They are very important to men. Men may make cities, but do not forget that cities can also make men.

A happy summer to you all, boys and girls!

Affectionately,

Lawrence Senesh

LAWRENCE SENESH

Purdue University
Department of Economics
Lafayette, Indiana

Glossary

aqueduct a large pipe or a canal that carries water from one place to another.

area a piece of land that is within certain boundaries or lines. It can be measured in square miles or in acres.

bartered To barter is to trade one thing for another without using money.

boundary the line that shows the limit or end of a certain area. It can be an invisible line or it might be a river or a lake.

burg a town that is protected by a wall.

bustee a run-down neighborhood in India.

by-product something that is made as part of the job of making something else. Wax is a by-product when gasoline is made from oil.

canals A canal is a waterway made by men for transportation or for irrigation.

cash grain broker a businessman who buys and sells grain for someone else.

causeway a road built across water or across wet land.

charter a written paper that a government gives to a city, a business, or a group of people. It gives certain rights and tells the things that can or cannot be done.

city manager a person hired to run the city government. The city manager is a specialist who is trained to solve city problems.

city planners A city planner is a specialist who plans for the whole city. He tries to make all the different systems in the city work well together. He must plan for the city's future.

civilization When people learn to communicate with each other and live together under laws or customs, they have a civilization.

coke a fuel made from coal. It is used in making iron and steel.

commission an amount of money paid to a person for selling goods or performing a service. It is usually part of the price of the thing that is sold.

common interests goals or ideas that people share.

Common Market a trade agreement between France, West Germany, Belgium, Italy, Luxembourg, and the Netherlands. It was formed in 1958 to make trade with one another easier.

compete to try to win a goal or prize away from another person. Businessmen compete for customers.

competition the act of competing.

conflicts A conflict is a disagreement between two or more persons or groups. There can be a conflict between ideas or a conflict between armies.

conquered To conquer is to gain control of other people by force.

corporation a business that is usually owned by a group of people.

countryside the land outside the cities.

craftsmen A craftsman is a worker who is skilled at a certain trade.

crude oil the oil that is pumped from a well.

customs A custom is an act or belief that is practiced for a long time by people until it becomes the expected thing to do.

demand to ask for something strongly.

democracy a government that gets its power from the people. The people elect men and women they want to lead them.

design a certain way that lines, shapes, and colors are arranged. In a city the lines, shapes, and colors of streets, buildings, and trees make up a design.

dhoti clothes worn by many people of India.

diagonally A diagonal line is one that runs in a slanting direction, as from one corner of a square to another.

dies A die is made of metal. It is made so that it can stamp out a shape on another piece of metal.

diesel A diesel engine gets power by burning oil for fuel.

dikes A dike is a wall made of earth or stone to keep a river or an ocean from flooding the land.

divided the labor When labor is divided, each worker does part of the total work. Each worker is a specialist at his job. The total work can be done faster and better than if one man did it alone.

drought a long time when no rain falls.

○

elected To elect is to choose by voting.

electronic Electronic machines get their power from tiny particles called electrons. A TV set uses an electronic tube.

emperor the ruler of an empire. An empire can be one nation or a group of nations.

enforce to make sure that a law is obeyed.

enormous huge.

erosion the slow wearing away of top soil by wind or water.

evaporation the changing of water into invisible mist. Water in oceans, lakes, and rivers is always evaporating.

○

famine a time when there is not enough food for people or animals.

filters A filter is used to help strain dirt from liquids or smoke. It can be made of cotton, wool, sand, paper, or charcoal.

foreigner a person from another country.

foundries A foundry is a place where metal is melted, then poured into hollowed-out things called casts. When the metal hardens, it is the same shape as the hollowed-out part.

freeway another name for a superhighway when no money is charged for traveling on it.

○

gondola a long boat with a flat bottom moved by one pole or oar.

goods anything that has value. Goods are usually for sale.

grain elevator a building where grain is stored.

guilds A guild is a group of men who all do the same kind of work. They join together to protect their trade and to make sure that only goods or services of high quality are produced.

gymnasium a school in ancient Greece. Today it is a building or room set aside for sports and exercise.

○

hollow a small valley.

○

icebergs An iceberg is a huge piece of ice floating in the ocean.

income the money that a person receives from his work, his property, or his investments.

irrigation supplying water to dry land so that crops can grow.

○

jute a strong fiber that comes from the jute plant.

○

lagoon a small and shallow body of water that is near a large body of water or connected to it.

landmarks A landmark is an object on the land that is easy to see and remember.

markets A market is a place where people meet to buy and sell goods.

master plan a plan that city planners make to guide the city in solving the city's problems now and in the future.

minerals hard substances found in the earth. Minerals include copper, iron, and gold.

mobile homes house trailers.

monorail a single rail on which a certain kind of train runs.

Mormons members of a religious group in the United States.

○

neighborhood an area in a city or town where people live near each other.

neighborhood aide a worker whose job is to help other people in his own neighborhood.

noblemen A nobleman is a highborn person such as a duke or a lord.

○

orbits To orbit is to follow a path around the earth or around a planet or a star.

ore a combination of minerals. Ore can be rock or sand that contains iron, silver, or other metals useful to man.

○

pamphlet a small, thin book with soft paper covers.

peninsula a piece of land that has water on three sides.

petitions A petition is a request that is usually written and signed by a group of people.

picketed Picketing is a way for people to show that they are in favor or not in favor of something. They usually carry signs that tell about their ideas.

plagues A plague is any dangerous disease that spreads rapidly among people.

plain a flat area of land.

pollution To pollute is to make unclean. Water that is filled with garbage and other wastes becomes polluted.

pollution detectors machines that test water for cleanliness. Specialists using the machine can tell if the water is polluted.

poverty being poor. People who live in poverty do not have enough money to buy all the food or clothes they need.

produce to create or make something.

profit usually, money made from a business. After a person pays the costs of running a business, the money left over is the profit.

prosper to succeed or to be well-off.

public transportation any kind of transportation that is for all people to use. It sometimes is paid for by the people's taxes.

○

raw materials materials such as wood, clay, sand, and oil, that come from the earth or forests, before men change them into finished products.

records A record is written and tells about things that happen.

refineries A refinery is a place where oil, sugar, or metals are cleaned and made ready for use.

rent a payment made to the owner of property for the use of that property. Many people pay rent for their houses or apartments.

represent to act for someone else in the way that person wants you to.

representative government a government where laws are made by a group of people representing the wishes of the people who elected them.

reservoir a place where water is stored for later use.

reward something that is received in return for a service. There are different kinds of rewards, such as money, praise, or a personal feeling of satisfaction.

rickshaw a small cart used to carry passengers in Asia. It is pulled by a man.

○

services A service is work that helps others. Most people who perform services are paid for their knowledge and skill.

sewage plants buildings with machinery that treats sewage with chemicals so that it will not be harmful.

slaves A slave is a person who is owned by another person. He has no rights and he can be bought and sold.

smelted To smelt means to melt ore to get the metal out of it.

specialists A specialist is a person who does one job well.

steam engines An engine is a machine that uses power to make other things work. A steam engine uses steam for power.

suburbs A suburb is an area or neighborhood of homes near a large city. Many suburbs are cities or towns themselves.

○

taxes A tax is money paid by most people for services that all the people receive from a government.

Teletype a typewriter that types automatically.

Telstar a satellite that can send television programs between the United States and Europe.

textile cloth.

transportation any means of moving people or goods from one place to another.

transportation system A system is several different things joined together according to a plan. A transportation system links together all the different kinds of transportation in a city.

treaty a written agreement between two or more nations in which each one agrees to act in a certain way toward the other.

triangle a flat shape with three sides.

○

union a group of workers who have joined together to protect their jobs and to improve their working conditions.

urban something to do with a city. For example, urban problems are problems that a city has but the countryside does not.

○

water meters machines that measure how much water is used in a home or a business.

weapon something used to fight with. Clubs, guns, and tanks are weapons.

weavers A weaver is a person who earns his living by weaving cloth out of threads.

wholesale the selling of goods in large amounts, usually to storeowners.

wholesale dealer one who sells goods in large amounts, usually to storeowners.

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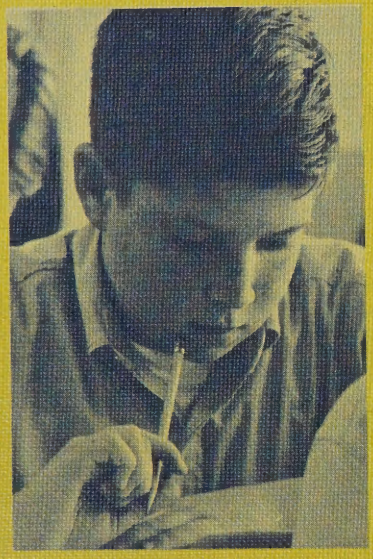

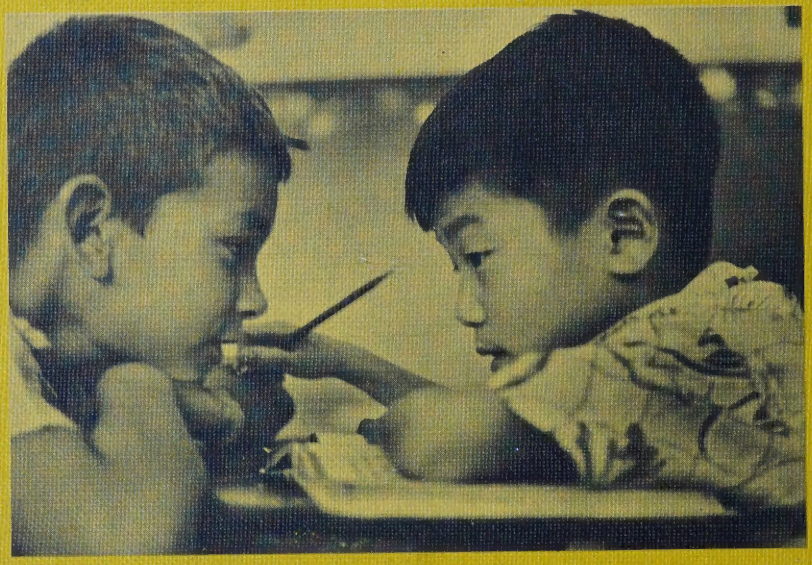

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